

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The Mining Journal is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 1952.—Vol. XLIII.

LONDON, SATURDAY, JANUARY 18, 1873.

[WITH SUPPLEMENT.] {PRICE FIVEPENCE. PER ANNUM, BY POST, £1 4s.

MR. JAMES CROFTS, STOCK AND SHARE BROKER,
No. 1, FINCH LANE, CORNHILL
(Established 1842).
Holders of MINING SHARES difficult of sale may find means of disposal for same through Mr. Crofts' agency.
Specially recommended for immediate purchase—ROOKHOPE VALLEY, CASTLE AN DINAS, BELOWDA BEACON, PENNERLEY, WEST TANKERVILLE, OLD BATHOLDS. Sellers of above at lowest prices.
Every description of shares bought and sold at net prices.

MR. W. H. BUMPUS, STOCK AND SHARE DEALER,
THREADEEDLE STREET, LONDON, E.C., has FOR SALE the following SHARES, free of commission:—
50 Anglo-Argentine, 8s 9d
50 Australian Unit, 2s 6d
100 Aberdunant, 10s. 9d.
50 Boswell Down, 2s.
45 Bog, 3s.
20 Birdseye Creek, £2 2½.
25 Cedar Creek, £3 ½.
100 Chonolais, 17s. 6d.
50 Carn Camborne, 1s.
1 Carn Brea, £15s.
20 Don Pedro, 25s.
50 Devon Consols, 6s.
15 Emma (Silver), £14.
20 East Foxdale, £2 ½.
25 East Grenville, £4 ½.
25 East Harrogate, £4 ½.
20 Flaxstaff, £15 ½.
W. H. B. transacts business in every description of shares at the best market prices, and free of commission.
Bankers: National Provincial Bank of England, E.C.

MR. YOUNGHUSBAND CHRISTIAN,
STOCK AND SHARE DEALER,
11, ROYAL EXCHANGE, E.C.

MR. W. TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C.,
Deals in all descriptions of Stocks and Shares at close market prices.

MR. JOHN MOSS, STOCK AND SHARE DEALER,
ST. MICHAEL'S CHAMBERS, 42, CORNHILL, E.C.
Bankers: City Bank, Finch-lane, E.C.

MESSRS. J. TAYLOR AND CO., 3, UNION COURT, OLD BROAD STREET, LONDON, E.C., and MINING EXCHANGE, SOUTH KING STREET, MANCHESTER, have the FOLLOWING SHARES FOR SALE:—100 Aberdunant, 12s. per share; 100 Hobb's Hill, fully paid, at 12s.

SILK AND CO., STOCK AND SHARE BROKERS,
32, REGENT STREET, PICCADILLY, W.
FRANK LEMMER, Secretary.

MR. KENNA AND CO., STOCK AND SHARE BROKERS,
5, UNION COURT, OLD BROAD STREET, E.C.

MR. THOMAS THOMPSON, JUN., 1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.,
has valuable hints as to the purchase of mining shares will be found in Mr. Thompson's "Investment Circular" for January, now ready, post free, price 6d.

MR. THOMAS SPARGO, MINING ENGINEER, STOCK AND SHARE DEALER, 224 and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

NOTICE OF REMOVAL.
MESSRS. G. R. ROSS AND CO., STOCK AND SHARE BROKERS (late of 26, Nicholas-lane), have REMOVED to their NEW OFFICES, 50, CORNHILL (CORNER OF FINCH LANE), LONDON, To which address all communications are requested to be sent.

MR. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C., transacts business at net prices in every description of security.
SPECIAL BUSINESS in MINING, Frank Mills, East Stow, East Boscastle, West Dolcoath, Welsh Ironworks, Willoughby, and Great Rock shares.
Mr. E. J. B. desires to direct the attention of his friends to the reports received from Northumbria and North Pool Mines, inserted in the Journal. For permanent investment or rise in price these cheap shares should be secured.

MR. T. R. COMYN, STOCK AND SHARE DEALER,
31, THREADEEDLE STREET, LONDON, E.C.
Bankers: National Provincial Bank of England.
New Dolcoath.—This mine is opening up splendidly, and will certainly pay dividends this year. The new hammer stamp will shortly be permanently at work and an immense quantity of tinstone is already prepared for stamping. On the 1st of the month of the mine the present price of the shares is absurdly low, and they should be bought at once.
Mr. Comyn deals in all legitimate mine share at close prices, and investors will find it to their advantage to apply to him.

MESSRS. WM. MARLBOROUGH AND CO., 29, BISHOPSGATE STREET WITHIN, LONDON, E.C. (Established 18 years), have FOR SALE the following SHARES at prices annexed:—
Aberdunant, 10s. 9d.
25 Anglo-Argentine, 8s 9d.
50 Australian Unit, £14.
100 Aberdunant, 10s. 9d.
50 Boswell Down, 2s.
45 Bog, 3s.
20 Birdseye Creek, £2 2½.
25 Cedar Creek, £3 ½.
100 Chonolais, 17s. 6d.
50 Carn Camborne, 1s.
1 Carn Brea, £15s.
20 Don Pedro, 25s.
50 Devon Consols, 6s.
15 Emma (Silver), £14.
20 East Foxdale, £2 ½.
25 East Grenville, £4 ½.
25 East Harrogate, £4 ½.
20 Flaxstaff, £15 ½.
W. H. B. transacts business in every description of shares at the best market prices, and free of commission.
Bankers: National Provincial Bank of England, E.C.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 23 years), is a SELLER at net prices of:—
20 Aberdunant, 10s. 9d.
25 Anglo-Argentine, 8s 9d.
50 Australian Unit, £14.
100 Aberdunant, 10s. 9d.
50 Boswell Down, 2s.
45 Bog, 3s.
20 Birdseye Creek, £2 2½.
25 Cedar Creek, £3 ½.
100 Chonolais, 17s. 6d.
50 Carn Camborne, 1s.
1 Carn Brea, £15s.
20 Don Pedro, 25s.
50 Devon Consols, 6s.
15 Emma (Silver), £14.
20 East Foxdale, £2 ½.
25 East Grenville, £4 ½.
25 East Harrogate, £4 ½.
20 Flaxstaff, £15 ½.
W. H. B. transacts business in every description of shares at the best market prices, and free of commission.
Bankers: National Provincial Bank of England, E.C.

WEEKLY MINING CIRCULAR, EVERY FRIDAY.—
LONDON DAILY RECORD, STOCK & SHARE LIST, Every Evening.
Published by P. WATSON, Stock and Share Dealer, 79, Old Broad-street, E.C.
Bankers: The Alliance Bank, and Union Bank of London.

MR. ALFRED E. COOKE
(Son and Successor to the late Mr. EDWARD COOKE),
76, OLD BROAD STREET, LONDON, E.C.
Bankers: Alliance Bank (Limited).

MR. T. E. W. THOMAS, STOCK AND SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Established 1857.

MESSRS. W. DUNN AND CO., STOCK AND SHARE DEALERS, 3 AND 4, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.
Orders received and commissions received.
Bankers: National Provincial Bank of England.

W. D. and Co. have FOR SALE the following at net prices:—
25 Aberdunant, 10s. 9d.
25 Bog, £1 6s. 3d.
20 Boscastle Down, £2
50 East Grenville, £4 ½
W. D. and Co. have orders to buy shares in the Gawton Copper Mine. Sellers will oblige by offering. To-day's price is £3 ½ to £3 ¾.

MR. C. POWELL, STOCK AND SHARE DEALER,
78, OLD BROAD STREET, LONDON, E.C.

MR. J. GREGORY, STOCK AND SHARE DEALER,
CROSBY HALL CHAMBERS, BISHOPSGATE STREET, E.C.

MR. WILLIAM WARD
(Late WARD and LITTLEWOOD),
CROSBY HOUSE, 95, BISHOPSGATE STREET WITHIN, E.C.,
DEALS IN ALL KINDS OF STOCKS AND SHARES, for cash or the account.

MESSRS. GREGORY, WHITAKER, AND CO., STOCK AND SHARE DEALERS, AND GENERAL FINANCIERS, 81, BISHOPSGATE STREET, LONDON.
Business transacted in all Marketable Securities at closest prices.

MESSRS. HOOKE AND CO.,
STOCK AND SHARE DEALERS,
AND FINANCIAL AGENTS,
9, UNION COURT, OLD BROAD STREET, E.C.;
And 25, WATERLOO STREET, BIRMINGHAM.
Messrs. HOOKE and Co. have shares for sale in mines, both dividend-paying and progressive, at close market prices, for which an early application should be made.

MESSRS. BLYTH AND HUTCHINSON,
STOCK AND SHARE DEALERS,
3, GEORGE YARD, LOMBARD STREET, LONDON, E.C.
Every information respecting both British and Foreign Mines will be furnished free by post or on application.
Price-List daily.
Bankers: Alliance Bank.

MESSRS. A. ENDEAN, FISHER AND CO., STOCK AND SHARE DEALERS, 32, NEW BROAD STREET, E.C.
Business transacted in all marketable Securities, for cash or account.
Bankers: London and Westminster, Lothbury.

MESSRS. HARLAND AND CO., STOCK AND SHARE DEALERS, 225 AND 226, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C. Attention is particularly requested to—
Penstruthal, North Pool, Cardiganshire Old Bog, Denbighshire, Cleve Hill Colliery, St. Lawrence, Wheal Whisper, Boscastle Down, Midlothian Mineral Oil.

IMPORTANT TO SHAREHOLDERS IN ALL PUBLIC COMPANIES.
WHAT TO SELECT—WHAT TO AVOID.
BY FREDK. WM. MANSELL,
ENGLISH AND FOREIGN STOCK AND SHARE DEALER,
PINNER'S HALL, OLD BROAD STREET, LONDON, E.C.

THE JANUARY number (now ready) contains a Comprehensive Review of the Position and Prospects of the General Investment and Mining Markets, &c., which should be read by all shareholders and others interested in such matters. It also contains many valuable hints to speculators.
* * * Differing in every respect from all monthly Circulars, it embodies a large amount of valuable information, and well deserves being filed for future reference.
—Fide London press.
Gratis to clients. Subscription 1s. per copy, or 10s. 6d. per annum.
Established 1857. Bankers: London Joint-Stock Bank.

MESSRS. VALENTINE AND CO.,
BANKERS, BROKERS, AND FINANCIAL AGENTS, having PURCHASED the GOODWILL of the BUSINESS of the OPEN STOCK EXCHANGE LIMITED, have REMOVED to Nos. 17 AND 18, CORNHILL, E.C., where they will be pleased to receive the orders of their friends for the PURCHASE and SALE of SECURITIES of all kinds, and generally to attend to any Banking or General Business that may be entrusted to them.
PUBLIC SALES BY AUCTION OF STOCKS AND SHARES are held every TUESDAY at the Auction Mart, Tokenhouse-yard, Lothbury, at 12.30 P.M. punctually. Catalogues of these sales may be had at the Mart, or at the offices, 17 and 18, Cornhill, on the previous Saturday.
Messrs. VALENTINE and Co. also issue a Weekly Circular, which is sent free to their clients, containing copious information on Money Market and Stock Exchange matters.

MESSRS. SANDY AND CO., STOCK AND SHARE DEALERS, 2, PINNER'S COURT, OLD BROAD STREET, LONDON, have SPECIAL BUSINESS in the FOLLOWING, as BUYERS or SELLERS, at close market prices:—
21 Emma, 20 Duchy Great Consols, 50 Wheal Mary, 15 Flaxstaff, 75 Crebhor, 50 West Esgrail Lie, 50 Castle-an-Dinas, 50 South Rom. Gravels, 70 Wheal Whisper, 25 Castle Gate, 100 Wheal Tregoss, 20 West Maria, 40 South Condurrow, 20 Hingston Down, 30 Dennis Consols, 30 Van Consols, 25 Penstruthal, 25 Aberdunant, 25 Gawton.

Business Transacted in every description of Stocks and Shares.
Daily Price List on application.

MESSRS. JAMES MAY AND SON, STOCK AND SHARE DEALERS, 9, GRACECHURCH STREET, LONDON, E.C.
VAN CONSOLS and PENSTRUTHAL are so firmly established both as to ample capital and rich lodes, that during the present spring the shares of both companies are sure to go to a high price.
Special business both as buyers and sellers at close market prices.

THE EMMA MINE—THE IMPENDING CRISIS.
Suppressed facts, and "things not generally known," will appear in JAMES HUME's next Circular.
FLAGSTAFF.—Are the dividends earned?—Answer in JAMES HUME's next Circular, in which the cause of the collapse of American mines will be demonstrated.
The best prices obtained for Mine Shares.

SPECIAL BUSINESS in Crebhor, Uny, Hingston Down, East Lovell, East Carn Brea, West Tankerville, South Roman Gravels, South Condurrow, Boscastle Down, East Chiverton, West Chiverton, &c., &c.
JAMES HUME, STOCK AND SHARE BROKER,
42, CORNHILL, LONDON.

MR. E. CHARTERS, 8, CRAIG'S COURT, CHARING CROSS, LONDON, has the FOLLOWING SHARES, free of commission:—
50 All-y-Crib, 20s.
50 Broadford, 30s.
100 Bog, £1 ½.
1 Carn Brea, £15s.
20 Don Pedro, £20.
5 Emma, £12 ½.
10 Eberhardt, £2.
8 East Lovell, £17 ½.

20 Marky Valley, £4 ½.
20 New Dolcoath, £2 ½.
50 Prince of Wales, 10s. 6d.
80 Rossa Grande, 6s. 6d.
70 West Maria, 2s.
20 West Maria, £18.
20 Wheal Crebhor, £3.
10 Wheal Grenville, £4 ½.

MR. CHARLES THOMAS,
MINING AGENT,
3, GREAT ST. HELEN'S, LONDON, E.C.

MESSRS. A. W. THOMAS AND CO.,
MINING AGENTS, AND STOCK AND SHARE DEALERS,
10, COLEMAN STREET, E.C.,
WANTED FOR CASH, and for which the best market price will be given:—
50 Hingston Down, and 100 South Roman Gravels.
OFFERS WANTED FOR:—100 Boscastle Down, 100 North Tankerville, 200 Aberdunant, and 20 North Levant.

MESSRS. G. LAVINGTON AND A. PENNINGTON,
44, THREADEEDLE STREET, E.C., STOCK AND SHARE DEALERS, have BUSINESS in the undermentioned:—
Birdseye, Mary Ann, Sweetland Creek, Emma, West Wheal Gorland, Malpaso, Flaxstaff, Gold Run, Bulwer, Kitty (St. Agnes), Pacific, Rica, Cedar Creek, East Van, West Esgrail Lie.

Parties wishing to purchase or sell in the foregoing are requested to make early application.
LAVINGTON AND PENNINGTON, SWORN BROKERS.

TO INVESTORS—NOW READY.
LAVINGTON AND PENNINGTON'S "MONTHLY RECORD OF INVESTMENTS," containing an exhaustive Review of the British and Foreign Stock and Share and Money Markets, &c., with an enumeration of safe investments, paying from 10 to 20 per cent. Price 6d. per copy, or 8s. annually. G. LAVINGTON and A. PENNINGTON, 44, Threadeedle-street, London, E.C.

MR. HENRY MANSELL, STOCK AND SHARE DEALER,
14, GREAT WINCHESTER STREET, LONDON, E.C.
Van Consols, Hingston Down, Lovell, and All-y-Crib shares should be purchased at once for a great rise from present prices.

JOHN B. REYNOLDS, STOCK AND SHARE DEALER,
70 AND 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.,
is able to obtain reliable information concerning British and Foreign Mines. The long experience he has had is at the service of the public.
And invites instructions concerning mines not dealt in on the London market, providing always that the undertakings are bona fide.
Established Fifteen Years.—Bankers: City Bank.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.
Capitalists and investors will find through us the best and safest medium for genuine information and advice, touching all kinds of Stocks and Shares, British or Foreign, together with the purchase or sale of them. All marketable securities dealt in at closest prices for cash or account. We advise the immediate purchase of the Bampfylde and the Bryn shares; these cannot fail to have a great rise in value.

INVESTORS IN ENGLISH AND FOREIGN BONDS,
Railways, Bank Shares, Mines, should consult
THE "INVESTMENT REVIEW,"
Independent, Fearless, and Exhaustive.
By JOHN B. PIKE, STOCK AND SHARE DEALER,
CROWN CHAMBERS, THREADEEDLE STREET, LONDON.
Post free, Threepence.

BARTLETT AND CHAPMAN, 36, CORNHILL, LONDON,
have SPECIAL BUSINESS (as Buyers or Sellers) in the following, at close net prices:—
The Lovell, West Chiverton, Penstruthal, East Lovell, Llanarmon, West Gwennap Consols, Great Laxey, North Jane, Van Consols.

Before investing, read our publications:—
"Handy Book for Investors" (third edition), price 10s. 6d.
"British Mines and Mining," price 2s. 6d.
"Investors' Directory," price 1s. 6d.
The "Investment and Financial Record," will be sent FREE on application.
Bankers: London and Westminster.

FERDINAND R. KIRK, STOCK AND SHARE DEALER,
4, BIRCHIN LANE, LOMBARD STREET, will BUY or SELL, at the closest prices—Belowda Beacon, Bog, Boscastle Down, Castle an Dinas, Emma, Old Bathols, New Pembroke, Pennerley, Rookhope Valley, South Roman Gravels, and Terras.
BELOWDA BEACON offers a safe and profitable investment.

MR. E. CAVENDISH TAIHOURDIN, 13 AND 14, CORNHILL, E.C., and SHREWSBURY, has for SALE for CASH or ACCOUNT, in the following SHARES, and is also prepared to Sell the same for delivery in three or six months, on receipt of a cover of 25 per cent. of the purchase money, or to make advances thereon on moderate terms:—

BELOWDA BEACON offers a safe and profitable investment.

M^R. E. CAVENDISH TAHOURDIN, 13 AND 14, CORNHILL, E.C., and SHREWSBURY, has for SALE for CASH or ACCOUNT, the following SHARES, and is also prepared to Sell the same for delivery free or six months, on receipt of a cover of 25 percent. of the purchase-money, or make advances thereon on moderate terms:-

Buyer.	Seller.	Buyer.	Seller.
Aberdunant	7s. 8d.	North Lovell	— 2½
All-y-Crib	£ 1 ½	Nangles	—
Beg	1 ½	North Jane	— 5s.
Botallack	—	New Dolcoath	£ 2½ 2½
Boscastle Down	2½ 2½	New Lovell	1½ 1½
Birdseye Creek	2½ 2½	North Tankerville	— 3½ 3½
Brostofford	27s. 6d. 32s. 6d.	Pennerley	2½ 2½
Blaen Caelan	10s. 12s.	Pacific	1½ 1½
Bwlch Consols	— 27s.	Penstruthal	1½ 1½
Cwm Eilan	7s. 6d. 8s. 6d.	Parys Mountain	1 1½
Cook's Kitchen	—	Plymmon	— 17s.
Carn Brea	153 15½	Perkin's Beach	16s. 18s.
Crenner and Wheal	—	Richmond Consols	4½ 4½
Abraham	12s. 15s.	Roman Gravels	18 18½
Cwm Yron	— 12s. 6d.	Rookhope Valley	2½ 3
Camp Floyd	2½ 2½	Reafada	21s. 25s.
Cathedral	—	Sierra Buttes	3 x d 3½ x d
Devon Consols	7½ pm. 7½ pm	South Carn Brea	3½ 4
Don Pedro	21s. 23s.	South Caradon	170 180
East Van	— 4½	South Condurrow	— 8½
East Foxdale	—	South Crofty	— 62
Emma	14 14½	South Tolcarne	— 7½
East Chiverton	— 7½ 7½	St. Just Amalgamated	— 30s.
East Langynog	— 2	South Roman Gravels	1½ 2
East Lovell	17½ 18½	St. Ives Consols	—
Eberhardt	6 6½	Sweetland Creek	3½ 4½
Forthcote	— 25s.	South Van	— 10s.
Flagstaff	14½ 15½	Tan-y-Ale	— 15s.
Gragwinion	14s. 18s.	Tankerville	14½ 14½
Gold Run	— 27½ 3½	Tincroft	57 58
Gawton	15½ 15½	Utrah	— 3
Hingston Down	9½ 9½	Van	36 39
Herodfoot	15 17	Van Consols	4½ 5
Hobb's Hill	— 25s.	West Basset	12 13
Lovell	9 10	West Tankerville	4½ 5
Mossdale	—	West Wheal Lury	— 2½
New Hingston	— 7s.	West Pant-y-Go	— 5s.
North Levant	— 11	West Jewell	2 2½
North Roskear	25½ 26	Wheal Grenville	5½ 6½
North Trekerby	1½ 1½		

Bankers: THE NATIONAL BANK OF SCOTLAND, London.

Messrs. BECK, DOWNARD, and Co., Shrewsbury and Welshpool.

Bankers: THE NATIONAL BANK OF SCOTLAND, London.
MESSRS. BECK, DOWNWARD, and Co., Shrewsbury and Welshpool.

THE LONDON STOCK AND SHARE AGENCY, 165, STRAND, LONDON, have SPECIAL BUSINESS as BUYERS or SELLERS in the undermentioned MINES, &c., viz.:—
Patent Gas, Emma Mine, Wheal Mary, St. Dennis Consols, Gawton, Castle an Dinas, Wheal Tregoss, East Langynog, West Chiverton, Terras (Tin), Pedan-drea (Tin), Duchy Great Consols, Great Luxembourg Railway, and sundry other companies.
Established 1858.

500 BLAKE'S PATENT ORE-CRUSHERS
NOW IN USE.
For catalogues, apply to—
MR. H. K. MARSDEN, 80 HO FOUNDRY, LEEDS,
Only maker in the United Kingdom.

MR. JOHN CARTER, MINE SHARE DEALER,
CAMBORNE, CORNWALL, transacts business in every description of shares at close market prices of the day.
The Tin Market continues to improve, and good dividend mines are in fair request for investment at higher prices. I still recommend the purchase of shares at present rates.

THE TECOMA SILVER MINING COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.

Capital £300,000, in 30,000 shares of £10 each.

Payable—£2 on application.

—£4 on allotment.

—£4 two months after allotment.

DIRECTORS.

Sir A. MALET, Bart., K.C.B. } Directors of the Flagstaff
G. C. FRAMES, Esq. } Silver Mining Company
W. MAITLAND, Esq. } (Limited).
T. R. TUFNELL, Esq.
F. T. TYARS, Esq. (Brown, Sharps, and Tyars), 18, Wat-
ling-street, E.C.
BANKERS—THE BANK OF SCOTLAND, 43, Lothbury, E.C.
SOLICITORS—J. and R. GOLE, 49, Lime-street, E.C.
BROKERS.

HENRY STAPLES, Esq., 4, Royal Exchange Avenue, E.C.
S. M. PENNEY and MACGEOGRAPH, 16, St. Vincent-place, Glasgow.
SECRETARY—J. D. SCOTT, Esq.

8 and 6, GREAT WINCHESTER-STREET BUILDINGS, LONDON, E.C.

This company is formed for the purchase and working of the Tecoma Mining property, situated in Box Elder County, Utah Territory, in the United States, and for other purposes set forth in the Memorandum of Association.

The property embraces four mines, having in the aggregate a location of 8000 ft., with a valuable tunnel located, and is about six miles from the Tecoma Station, on the Central Pacific Railroad, having an excellent wagon-road from the mines to the station, constructed by the railway company for the purpose of hauling sleepers. The climate is good, mining being free from interruption from snow and storms, and there is abundance of water and timber.

The purchase-money is £280,000, payable £150,000 in fully paid-up shares, and £130,000 in cash and fully paid-up shares, in such proportions as the directors may think proper. £20,000 in cash will be reserved for working capital. The purchase-money will be paid on full possession of the property being given, with a title in fee simple, free from incumbrances.

The property has been surveyed on behalf of the vendors by Mr. Maxwell, the manager of the Flagstaff Mine (whose report on that mine has been fully borne out), in whom the board have great confidence, and his report, of which careful perusal is requested, is appended.

His estimate of profits, it will be seen, gives a net daily profit, in currency, of £450; this multiplied by 280 (working days) will give an annual net profit of £126,000, or about £250,000 at the present exchange.

It is proposed to pay quarterly dividends, which are expected to commence at the expiration of four months from the time the company obtain full possession of the property, and it will be seen that Mr. Maxwell's estimates justify the belief that the dividend will be at the rate of 24 per cent. per annum.

Colonel Stanford will join the board, but being one of the vendors will not do so until the purchase is completed.

The principal vendors of this property are the same that introduced the "Flagstaff" and the "Last Chance" to the English public. The former has declared dividends amounting to 25½ per cent. on the capital of £300,000 in the first year. The "Last Chance," although it has not commenced its dividends as soon as expected, is known to have developed such an abundance of good ore as to place its success beyond doubt. The directors, therefore, implicitly rely on the good faith of the vendors, and upon the report of Mr. Maxwell.

An agreement, dated the 7th day of January, 1873, made between George B. Graft of the one part, and Edward Johnson of the other part, has been entered into. A copy thereof, together with the Memorandum and Articles of Association, may be seen at the offices of the company.

If no allotment be made, or the purchase be not completed, the deposits will be returned in full; if the number of shares allotted is less than that applied for the balance of the deposit will be applied on account of the amount payable on the shares allotted.

Applications for shares on the form accompanying the prospectus, together with a deposit of £2 per share, should be left at the company's bankers. Prospectuses and forms of application can be obtained at the company's offices, and of the brokers.

THE TECOMA SILVER MINING COMPANY (LIMITED).

FORM OF APPLICATION FOR SHARES.

To the Directors of the Tecoma Silver Mining Company (Limited).
GENTLEMEN,—Having forwarded to your bankers the sum of £ , being a deposit of 2s. per share on my application for shares of 10s. each in the above company, I request you to allot me that or any less number of the said shares; and I hereby agree to accept such allotment, and to pay the balance in respect of such shares in terms of your prospectus.

Name in full
Address
Description
Signature
Date

MEMORANDUM OF ASSOCIATION.

- 1.—The name of the company is the Tecoma Silver Mining Company (Limited).
- 2.—The registered office of the company shall be situated in England.
- 3.—The objects for which the company is established are:—
(A.) To acquire a certain freehold mining property, with all its minerals, rights, and privileges, situated in the Box Elder County, in the Territory of Utah, in the United States of America, and known as the "Shanley, Lumsden, Orbit, and Gladstone" claims, and to acquire any other mining lands in the said Territory of Utah, or any tunnel rights and interest therein respectively; and also to acquire land for the purpose of erecting thereon smelting-works and furnaces, and mills; and to erect smelting-works and furnaces, and mills; and further to acquire a right or rights to water and water-power.
- (B.) To develop, open up, and work said mines, or any other mines which may be required, and to crush and smelt the ore therefrom, and otherwise render marketable the produce of any of said mines.
- (C.) To sell the produce of any mines in a rough or manufactured state in America, or elsewhere, and to sell or let any mine or mines from time to time acquired by the company.
- (D.) To borrow money and issue bonds transferable or to bearer, secured on all or any of the property of the company.
- (E.) The amalgamating with any other company carrying on business of a similar character, doing all such other things as are necessary, conducive, or incidental to the attainment of the above objects.

- 4.—The liability of the members is limited.
- 5.—The capital of the company is £300,000, divided into 30,000 shares of £10 each.

Tecoma, Utah Territory, U.S.A., November, 1872.

I have carefully examined the Tecoma mining property, situated in Box Elder County, Utah Territory, and beg to report as follows:—

DESCRIPTION OF COUNTRY AND LODES.

The mines are situated on the spur of a mountain range, running southward from the line of the Central Pacific Railroad and Tecoma Station. The country rock in which the mines are located is a highly metamorphosed limestone, similar in character to the limestone measures at the lead of Little Cottonwood, wherein are situated the Emma, Flagstaff, Davenport, and other justly celebrated mines; the planes of stratification do not exhibit the same parallelism, but the probability of meeting with large lateral deposits is much greater than in Little Cottonwood.

The mining locations consist of the Shanley, 2000 feet; the Lumsden, 1000 feet; the Orbit, 2000 feet; and the Gladstone, 3000 feet; also a valuable tunnel location, which will intersect all of the lodes in 500 feet driving.

The Shanley and the Gladstone Mines have been opened upon to a considerable extent, whilst the Lumsden and Orbit have only been proved up by small trial-shafts at distances along their course. The gossan, or croppings, in these trial shafts is of a highly encouraging character for the production of riches in depth, as will be seen by comparison with the gossan and ore of Shanley Mine, to which they run parallel at distances of 150 feet and 500 feet, and I have no doubt that when they are developed they will prove equally productive as the Shanley.

The Gladstone Mine has been wrought upon by means of a shaft sunk upon the angle of the vein to a depth of 85 feet, which has laid open a considerable quantity of vein, and a large quantity of rich galena ore matter. The galena assays 58 per cent. lead and 113.74 ozs. silver, the latter equal to \$147.74, and the vein matter assays 19 per cent. lead, and 24.79 ozs. silver, equal to \$29.05. It will be needful to extend levels from it so as to open up ore ground, and in three or four months time this mine should be producing at least 10 tons per day, worth \$1400 per day at least in silver, without taking into account the value of the lead, and this quantity will increase as the mine attains development. I believe this to be a very valuable lode, although the ores are not so rich as those of the Shanley Mine, which have been wrought upon by means of the shaft sunk upon the angle of the vein, from which levels have been extended north and south upon the course of the vein, opening up a large quantity of valuable ore ground. Shafts have been sunk at 200 feet and 180 feet north and south upon the vein, both of them now in ore, averaging in width 5 feet, and worth \$144.57 in gold and silver, exclusive of lead. In the discovery shaft the vein has widened out to 10 feet, and in the bottom of the level, south of this shaft, there is a body of ore going down 15 feet in width. These levels should be pushed on with vigour, and the shafts to the north and south sunk to communicate. When this is effected a body of ore will be laid open which will compare favourably in quantity with any mine in this Territory, whilst it will greatly surpass in richness the average of the Emma and Flagstaff ores in Little Cottonwood.

CHARACTER—QUANTITY OF ORE.

Taking the average width of this vein for 150 feet at 4 feet, and for 50 feet at 9 ft., and calculating as much as 15 feet cube to the ton, there is 3900 tons of ore in sight, worth in silver and gold alone \$736,242, without taking into account the lead and the rich ore hereafter referred to; this amount will be increased as the works are extended. The ore consists of grey and yellow carbonates of lead with very little galena. There is enough iron in the ores to flux them, and they are far easier smelted than any other ore I have seen in this Territory.

ASSAYS.

The following are the assays of samples of ore taken by me from across the lode at the points indicated:—

	Lead.	Gold.	Silver.	Value Gold and Silver.
From sides of shaft from surface down-wards at several points	44	14	61.24	82.7
From bottom level, south	35½	44	161.66	205.17
From bottom level, north	40	58	137.08	179.21
From back of level	32.3-10	74	320.82	430.8
From cross-cut east of south end of level	29	29	58.33	81.40
From winze below level	30	56	87.43	124.79

Average value 35.1-10th per cent. in lead, and \$183.78 in gold and silver. Selected pieces are occurring in pockets throughout the vein assays 77½ per cent. lead, 112½ ozs. silver, and 2.91 ozs. gold per ton, value in gold and silver, \$1812.10 per ton.

ton. I have omitted this assay in the above average because, although there is a considerable quantity of this very rich ore in the lode, such figures would so increase the average assays as to render it unsafe to estimate upon them.

NECESSARY MACHINERY AND WORKS, AND CAPITAL REQUIRED.
In order to deal with the quantity of ore that the Shanley Mine will be capable of turning out it will be necessary to erect a steam-engine on the Shanley main shaft until the deep tunnel intersects the lode; the engine can then be placed underground, and the sinking of the shaft below the tunnel continued. Three blast furnaces should be commenced at once, and in 90 days they would be turning out bullion. For developing all the lodes, driving the tunnel, and putting up three good furnaces a capital of £15,000 would be ample.

By the time the furnaces are ready (90 days from being commenced) a stock of at least 2000 tons of ore could be accumulated at the furnace site, and after that a steady supply of ore could be depended upon to keep two furnaces always in full operation. There would be no difficulty in accumulating a stock of 100,000 bushels of charcoal by the time the furnaces are ready to go to work. Charcoal can be delivered here at 20 cents per bushel.

There is plenty of timber in the immediate district for mining purposes, and for making charcoal from. Iron and other mining supplies can be delivered at the mines at a lower cost than that of most other mining companies. There is an abundance of water for supplying blast engines and turbines.

The climate is superior to any of the other mining districts of Utah. No interruption need take place on account of snow storms, and the weather is temperate when in other districts it is very severe.

The mines are situated about 6 miles from Tecoma Station, on the Central Pacific Railroad. There is an excellent wagon-road, constructed originally by that company for hauling down timber for making their railroad sleepers long before these mines were discovered. Contracts can be made for hauling the ores from the mine to the furnaces for \$3 per ton, and \$2 per ton for hauling the bullion down to the railroad.

Assuming that it will take 3 tons of 35 per cent. lead ore to make 1 ton of bullion, and that 30 tons of ore are reduced to bullion daily, the following result would follow:—

Mining 30 tons of ore, including all charges for works of discovery, tunnel, &c., at \$10	\$ 300
Hauling 30 tons to furnaces, at \$3	90
Smelting 30 tons of ore, at \$20	600
Management and sundries	5
Cost of production	\$ 995

Ten tons of bullion at (say) 120 ozs. of silver to the ton of ore, after allowing for loss on smelting, &c., equal to 360 ozs. per ton of bullion, and taken at present selling price of Flagstaff bullion (gold, silver, and lead), delivered at railroad depot, currency

Deduct haulage and loading

Deduct expenses, as above

Net daily profits in currency

I have made enquiry respecting the title to the mines, and find that they are among the first locations in the district, with nothing in the immediate vicinity to interfere with them; the way in which the locations have been made effectually prevent any adverse claims, and I see nothing to prevent a patent being granted on each of the mines as applied for.

THE TECOMA SILVER MINING COMPANY (LIMITED).
NOTICE IS HEREBY GIVEN, that the LISTS OF APPLICATION FOR SHARES in the above will be closed on TUESDAY next, the 21st instant, for LONDON, and on WEDNESDAY, the 22nd instant, for COUNTRY applications.
(By order) J. D. SCOTT, Secretary.
8 and 6, Great Winchester-street buildings, London, E.C., January 17th, 1873.

THE CARDINHAM SILVER LEAD MINING COMPANY (LIMITED), CORNWALL.

Incorporated under the Companies Acts 1862 and 1867, by which the liability of shareholders is limited to the amount of their shares.

Capital £25,000, in 25,000 shares of £1 each.

Of which £15,000 only are now offered for subscription.

10s. per share on application, and 10s. on allotment. If no allotment takes place the money will be returned in full.

DIRECTORS.
THOMAS HAZELDINE, Esq., The Parks, Evesham, Worcestershire.
JOHN KING, Esq., Whitehall, Bedfordshire.
BRIDGES CARMICHAEL HOOKE, Esq., 32, New Broad-street, London, E.C.
GEORGE BAYLIS, Esq., Woodley, Berkshire, Director of the Westminster Brewery Company.
EDWIN SILFIFANT, Esq., 1, Gresham-buildings, Basinghall-street, London, E.C.
WILLIAM CREMER, Esq., Brunswick-road, Brighton.

MANAGER AND CONSULTING ENGINEER.
JAMES HARRIS JAMES, Esq., M.E., Grampond-road, Cornwall.
SOLICITORS.
Messrs. TOWNLEY and GARD, 2, Gresham-buildings, Basinghall-street, E.C.
BANKERS—THE CITY BANK, Threadneedle-street, London, E.C.
SECRETARY (pro tem.)—JAMES FARIE, Esq.
TEMPORARY OFFICES.
1 AND 2, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.

PROSPECTUS.
This Company has been formed for the purpose of acquiring, working, and developing the "Cardinham" Silver Lead Mines, a valuable mining property, situated in the Parish of Cardinham, in the County of Cornwall, and about four miles from the Bodmin Road Station, on the East Cornwall Railway.

The sett is very extensive, comprising an area of 188 acres or thereabouts, and has the advantage (which few mines in this district possess) of a permanent stream of water running close to the mines, which will enable the company to dispense with costly steam machinery, the water-power being ample at all seasons of the year to provide for the ventilation and working of the mines, and crushing the ores, for which purposes the aid of steam is usually required. The property to be acquired by this company is held on lease for 21 years, from the 29th day of September, 1871, at a ground rent of £20 per annum, and a royalty of 15th, which, however, will merge in the royalties when they exceed the sum of £20 in any year.

There are numerous lodes intersecting the sett, on one of which an adit level has been driven north for a distance of upwards of 150 fms. This lode has been proved to be in places 4 ft. wide, whilst it averages for the length driven a width of about 2 ft. The ore which is obtained from the lode is of a very superior quality, and is found in great abundance, whilst the essential features of a good geological formation for lead ore are most satisfactorily displayed. Recent examination and trials of the property have led to the further discovery of a splendid lode in the winze about 2 ft. wide, producing handsome specimens of silver-lead ore.

The mine is now being worked by a private individual, and is, consequently, a going concern.

The following is an analysis of the ore taken from the Cardinham Mines, and made by John W. Perkins, Esq., Dr., Ph., F.C.S.

Lead	30.00
Sulphur	4.30
Copper	0.20
Silica	65.00
Lead equal to 6 cwt. to the ton of ore; silver 40 ozs., 16 drams., 16 grs. to the ton of ore.	100.00

For the development of the mine a water-wheel with usual appurtenances for crushing the ore previous to its being sent to the market, also for the ventilation of the mine, and for other purposes, is now required, and as there is, as before stated, abundant water supply on the property, a water-wheel of sufficient power can be erected at a comparatively small cost.

The directors recommend a careful perusal of the reports of J. Harris-James, M.E., Capt. Hampton, and James Bray, who are well known in the county, and are intimately acquainted with this sett and the surrounding district, having been engaged in the management of some of the most successful mines in Cornwall. These reports will be found to justify the directors in anticipating for the company a great and lasting success. They believe it to be an enterprise of unusual promise, and one that will yield large dividends to the shareholders. Being impressed with this conviction, it is the intention of the directors to proceed at once with the working of the mine. The continuation of the adit level will thoroughly prove the resources of the property, and the great expense which attends the development of numerous mines will be dispensed with.

Contracts have been entered into for the transfer to the company of the lease of this property, and all rights thereunder, and bear date the 21st day of August, 1872, and the 5th day of January, 1873, respectively, and are made between Robert Orkney of the first part, and John Sadler Houston (on behalf of the company) of the other part, which can be seen at the offices of the company, as also copies of the lease, the Memorandum and Articles of Association, and the reports.

Application for shares should be made on the form accompanying the prospectus, which must be forwarded, together with a deposit of 10s. per share, to the bankers of the company, or to the secretary at the offices of the company, 1 and 2 Great Winchester-street-buildings, London, E.C., where prospectuses and forms of application may be obtained, and specimens of the ore may be seen.

Not more than 15,000 shares will be allotted in the first instance, and the vendors, having regard to this fact, have agreed to accept 7000s., viz., £4000 in cash, and £3000 in fully paid-up shares of the company, in full payment of the purchase-money for the lease of this property, and all rights thereunder.

REPORTS.
THE CARDINHAM SILVER-LEAD MINES
These mines are situated in the parish of Cardinham, in the county of Cornwall, and about four miles from Bodmin Road Station. The sett is very extensive, and are held under lease for 21 years from Lord Roberts, at a royalty or dues of 1-15th. The lodes traversing this property are highly argentiferous, large and well defined, and can be easily and cheaply developed, for the mines can be wrought by the aid of the water-power, there being two streams that are available, and the configuration of the property is such that an adit is being driven on the course of a lode, which I find already extended upwards of 100 fms., and attained a depth of about 30 fms., and for the whole of its driving has passed through ore ground.

This lode was first discovered by its "backing" or yield of lead at the surface or a foot or so below, as it can now be seen. A winze can now be sunk in the bottom of the adit, where it can be seen that as depth is attained the yield increases. I

strongly recommend that a water-wheel, with all necessary appurtenances, be erected, so as to sink on the rich lode in the winze with all possible speed. In conclusion, I beg to remark that the geological and mineralogical features are of a very promising character for the production of argentiferous wealth. Upon the whole, I look upon this property as a very remarkable one possessing unusual great advantages.—Grampond-road, July 1, 1872.
J. H. JAMES.

THE CARDINHAM SILVER-LEAD MINE.

The lead sett in question is in the parish of Cardinham, about three miles from Bodmin. There are many lodes crossing the sett, two of which yield lead close up to the surface. They are not far from each other, and their bearing is about 20° east of north and west of south. The adit was taken in a valley, and on the side of a hill. At first it was driven obliquely, or, in other words, a cross-cut to the lode, where a shaft is sunk from surface on the lode, and communicated to the back of the adit. It commenced and continued in lead, but more lead at the adit than surface. After the lode was intersected the adit was driven on its course. I never saw a more regular lode so near the surface, although I have seen most, if not all, the best lodes in the West of England, and some in Wales; it varies in size from 1 ft. to 4 or 5 ft. big, and it increases in size going down. It carries a tenacious clay, coarse, or flooken, and underlies but little, and where the most lead is the walls of the lode are well defined. This is very important. Just under this rise they sunk as deep as they could for water, and I am told there is a solid leader of lead several inches big in the bottom, besides stones of lead in the other part of the lode. I have no reason to disbelieve this, as what can be seen indicates a good lode gone down. One good, and I may add essential, feature is the gossan, which is Al (friable quartz). It commences at surface, and having gone down below adit it remains to be proved how deep it does go. It contains lead and silver. I see by the formation of the lead, or rather the grain of the lead, that it contains silver also. There is sufficient lead in the adit to let on tribute (that is, in places), and I am told that men have offered to take it at 10s. in 11. There is surface water available for water-wheels, and should there be a corresponding improvement in the next level below that depth. The ground is very congenial for lead (clay-slate), and mostly stands without timber. The ground is easy to explore, and a good mine might be laid open for comparatively little money.
JAMES HAMPTON.
Bodmin, July 24.

THE CARDINHAM SILVER-LEAD MINE.

I have very carefully examined this mine, which I have well known for some years. The sett, which is very extensive, is situated in the parish of Cardinham, in the County of Cornwall, about four miles from Bodmin Road Station. An adit has been driven north in the course of the lodes about 150 fms.; the lode presents a most beautiful appearance, and in many places is fully 4 ft. wide. A permanent stream of water runs close to the adit of sufficient power to work a water-wheel, and the mine is in every way situated for most economical working. I have always held a high opinion of the value of this mine, and my recent examination confirms that opinion. I have had 30 years' experience as a miner, principally in lead mining, and I say, without fear of contradiction from any quarter, that this is a most valuable property, well deserving the utmost attention.
JAMES BHAY.
July 23, 1872.

THE SILBER LIGHT COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.
Capital £120,000, divided into 12,000 Shares of £10 each,
Of which 8000 are Ordinary and 4000 are Deferred Shares.

£1 payable on application, and £3 on allotment, and the balance in three equal instalments of £2 each, payable at intervals of two months, calculated from the date of allotment.

DIRECTORS.
Rear-Admiral Lord JOHN HAY, C.B., F.R.G.S., 149, Piccadilly (Chairman).
Sir JOHN FARQUHAR, Bart., Grafton-street, Bond-street.
C. E. HABICHT, Esq. (Messrs. Clews, Habicht, and Co., Bankers), 11, Old Broad-street.
M. DE COSTA ANDRADE, Esq., Merchant, 62, Wood-street, Cheapside.
MANAGING DIRECTOR.
A. M. SILBER, Esq. (Messrs. Silber and Fleming, Merchants), 56, Wood-street, Cheapside.

BANKERS.
Messrs. UPTON, JOHNSON, UPTON, and BUDD, 20, Austinfriars, E.C.
Messrs. PETRE and POSNO, 7, Tokenhouse-yard.
BANKERS.
THE IMPERIAL BANK (LIMITED), Lothbury, E.C.
SECRETARY (pro tem.)—Mr. W. DUFAUR CLARK.

OFFICES.
Nos. 70 AND 71, PALMERSTON BUILDINGS, OLD BROAD STREET, E.C.

ABRIDGED PROSPECTUS.
This company is formed for the purpose of acquiring from Mr. A. M. Silber and working his patent rights for the United Kingdom, so far as regards improvements in lamps and apparatus for lighting purposes. These inventions are applicable for lighting towns, factories, private houses, railways, ships, and other places where a powerful, steady, and pure artificial light is required. This light is produced by either mineral or vegetable oils, as also by animal oils.

In addition to the manufacture and supply of lamps under the patent processes, it is intended that the company shall sell every description of oil, and that all articles sold shall bear the company's trade mark as a guarantee of quality.

The improved lamps and burners as applied to public use have already given the greatest satisfaction, and are now in use on the Metropolitan, the Great Eastern, the North London, the London, Chatham, and Dover, and the Great Western Railways, where they may be seen; and orders are now on hand for further supplies.

The following letter, addressed to Mr. Silber by the general manager of the Metropolitan Railway, will show the estimation in which the latter holds the lamps supplied to that company:—

Metropolitan Railway, General Manager's Office,
32, Westbourne-terrace, London, W., 9th January, 1873.

DEAR SIR,—I have pleasure in stating that your lamps, which have been fitted in one of our trains for about nine months, have proved very satisfactory. Perfect lighting of the carriages is essential on this line, and our experience so far has proved that your lamps are the best that we have used, both as regards illuminating power and economy.

Yours faithfully,
A. M. Silber, Esq.

Mr. Silber has but lately completed his models for ship lamps. At the recent competition at Shrovesbury, under the direction of the Marine Department of the Board of Trade, Mr. Silber's masthead light, burning colza oil and mineral sperm oil, of which the flashing point was 450° Fahr., proved the best.

The directors have in their possession the original letter and report from the Board of Trade, intimating to Mr. Silber the result of the competition.

Mr. Silber also supplied to the Earle's Shipbuilding Company starboard, port, and masthead lights for Lord Alfred Paget's yacht, and a letter from Lord Alfred Paget is in the hands of the directors, in which he compliments Mr. Silber on the great success obtained, and gives his opinion that "no ship ought to be without them."

Orders are now on hand from the Cunard, the Inman, the Pacific, and the American Pacific mail lines of steamers.

On one of Mr. Silber's systems the oil can be conveyed through pipes to burners in a similar manner to gas. The arms, or brackets, to which the burners are attached require no stop-cock. The light may be either blown out or turned out without danger, the key or worm used being merely to regulate the extent of light required.

In reference to the economy, safety, and purity of Silber's light in table, street, and other portable or fixed lamps for general use, the directors have great satisfaction in drawing attention to the following letter received from Mr. Valentini, F.C.S., the Principal Demonstrator of Practical Chemistry at the Royal College of Chemistry:—

A. M. Silber, Esq. Royal College of Chemistry, London, January 2, 1873.
Sir,—Having for nearly three years followed your improvements in Lights with great interest, and having repeatedly examined into their merits, it gives me pleasure in briefly stating what I consider their advantages to consist in:—

1.—The volatilisation of the oils before and on being conveyed by the wick to the flame, whereby the functions of the wick are materially assisted, so as to enable it to burn mineral oils for four months and more without ever requiring trimming, and so as not to materially raise the temperature of the main body of the oil.

2.—The regulation of the admission of air to the flame in such proportions as to produce the most advantageous combustion by means of air currents thrown into the centre and around the flame.

3.—Perfect safety from risk of explosions, since a carefully regulated gaseous mixture of oil vapour and air can only be formed at the top of the wick, where it is immediately consumed.

4.—The construction of the lamps, based upon the vaporisation of the oil, ensures thorough combustion, without producing any disagreeable odour or noxious vapour or smoke.

5.—The principle involved in the construction allows of the burning either of mineral, vegetable, or animal oils, and of oils which hitherto have never been burnt to advantage, such as the so-called heavy mineral oils.

6.—The same principle is equally applicable to ordinary moderator lamps, with the additional advantage that largely increased lights can now be constructed on the principle of the moderator lamp, burning colza or mineral oils.

7.—The light produced by the burners constructed on these new principles is whiter and steadier than any light I am acquainted with, and the increase in the illuminating power as compared with that from ordinary burners hitherto in use is fully equal to from 40 to 50 per cent., without any increased consumption of oil.

8.—My experiments, which will be found in detail in the "Journal of the Society of Arts" of Dec. 23, 1870, show that a light can be produced from mineral oils 40 to 50 per cent. cheaper than the same light from coal gas, costing 8s. 9d. per 1000 cubic feet.

9.—Experience has shown that the burning of properly purified mineral oil has no detrimental effect upon animal and vegetable life.

I abstain from entering into the practical application which your new lights are capable of for the purpose of lighting up streets, houses, railways, ships, &c

payment, will be paid on the completion of the purchase, and £10,000, the balance, will be paid at the expiration of three months from allotment. The deferred shares will be entitled to no dividend in any year, except out of the surplus of the net profits, after first deducting a dividend at the rate of 10 per cent. per annum on the amount paid up in respect of all the other shares of the company, and such further sum, not exceeding £5400, as shall be carried for that year to a reserve fund. Whenever the net profits made by the company during any two consecutive years (after the first year from the incorporation of the company) shall amount to a sum sufficient to pay a dividend at the rate of 10 per cent. per annum on the paid-up capital, then the deferred shares are to rank with respect to dividend, and to be in all respects the same as the ordinary fully paid-up shares. Mr. Silber is debared from disposing of three fourths of these deferred shares for a period of two years. No promotion money or other preliminary expenses will be paid by the company, who will only pay the expenses of the printing, advertising, and other legal expenses attending its constitution and incorporation, and the issue of the capital offered to the public.

An agreement has been entered into, dated the 10th day of January, 1873, and made between the above named A. M. Silber, of the one part, and the above named M. De Costa Andrade, as trustee for and on behalf of the company, of the other part. This agreement, with prints of the specifications of the several patents referred to in the agreement, and the above-mentioned letters and reports from the Board of Directors, Mr. Valentim, and Mr. Fenton, and prints of the Memorandum and Articles of Association of the company, may be seen at the offices of the solicitors to the company, No. 20, Abchurch-lane, E.C.

Full prospectuses, containing the articles from the *Times* and *Lancet*, and forms of application for shares, can be obtained of the brokers, at the Imperial Bank, Lombard-street, and at the offices of the company, 70 and 71, Palmerston-buildings, E.C.

THE SILVER LIGHT COMPANY (LIMITED).—Notice is hereby given, that the SUBSCRIPTION LIST for the SHARES in this company will be CLOSED on MONDAY next, January 20, for LONDON, and on TUESDAY, January 21, for COUNTRY APPLICATIONS.

By Order, W. DUFAUR CLARK, Secretary (pro tem.) Nos. 70 and 71, Palmerston-buildings, London, E.C., Jan. 16, 1873.

GLASGOW AND CAPE BRETON (NOVA SCOTIA) COAL AND RAILWAY COMPANY (LIMITED). Issue of £40,000 Debentures.

Being a third charge upon the company's railway, colliery, and all and sundry, and their undertakings, as follows:—
£3,000 at £50 per £100, bearing interest at 9 per cent. per annum, convertible into shares at any time within ten years from the date of issue, and redeemable at par (if not so converted) at the expiry of the said ten years; also,
£6,000 at £50 per £100, bearing interest at 10 per cent. per annum for five years, not convertible into shares, and redeemable at par at any period after three years from the date of issue, upon giving six calendar months previous notice of such intention on the part of the company.

The directors of this company being authorised, pursuant to a resolution passed at a special general meeting of the shareholders held this day, to issue debentures to the above extent, are prepared to receive applications for the same. The debentures will bear interest from the 1st day of January, 1873, and be issued in sums of £100, with half-yearly coupons attached, payable at the bankers of the company. The first coupon will become due on the 1st August, 1873.

The above sum of £40,000 now issued is required to enable all the liabilities of the company to be cleared off, to provide the rails required in the spring for sidings, and also to leave a margin of working capital during the winter months, and until the spring shipments can be realised.

The line is now open throughout, from Sydney to the Lornay. Reserve, and Schooner Pond Collieries, and is equipped with locomotives and rolling stock; 20,000 tons of coal have already been sold, and carried over the line since its completion.

The annual charge for interest, including the present debentures, will be £6600, and the estimated net revenue arising from the profits on coal sales and railway freight, after deducting working expenses and depreciation of plant, £15,700.

The data upon which these calculations are based can be had at the company's offices, where forms of application can be obtained.

The bonds will be allotted as applied for. Ten per cent. is payable on application, and the balance on allotment.

By order of the Board, WALTER WRIGHT, Secretary. Offices, 5, Great Winchester-street-buildings, London, E.C. 10th January, 1873.

THE TREVARTH FIREBRICK AND CLAY COMPANY (LIMITED).

Incorporated under the Joint-Stock Companies Acts, 1862 and 1867.

Capital £30,000, in 10,000 shares of £3 each.

Payable—£10 10 0 on application.
" 10 0 0 on allotment.
" 10 0 0 three months after allotment.

DIRECTORS.

J. G. FRASER, Esq., 9, Great Queen-street, Westminster.
Capt. PHILIP H. ELLIOTT, Army and Navy Club, Pall Mall.
HAMBERTON CRUMP, Esq., 15, George-street, Hanover-square.
A. D. THORNTON, Esq., 14, Brompton-crescent, S.W.
CHARLES THOMAS, Esq., Buckhurst-hill, Essex.

MANAGERS.

Messrs. JOHN MICHAEL WILLIAMS and CO., Redruth, Cornwall, and their London Agents.

Messrs. GLYN, MILLS, CURRIE and CO., 67, Lombard-street, E.C.

SOLICITOR—GEO. FREEBORN, Esq., 2, Bucklersbury, E.C.

ATTORNEY—FREDERICK HARPER, Esq., 1, Abchurch-lane, E.C.

SECRETARY (pro tem.)—MR. C. L. EATENTON.

TEMPORARY OFFICES—18, COLEMAN STREET, LONDON.

This company is formed for the purpose of purchasing and working a valuable property, consisting of leases for 21 years, of about 21 acres situate at Trevarth, Cornwall, in the parish of Gwennap, near Redruth, Cornwall, and through which runs a deep bed of the very richest description of fire-clay, suitable for making fire-bricks, gas retorts, crucibles, and all descriptions of fire-clay goods of the highest class.

The estate is bounded on the east by a good road with frontage, and on the west by the Redruth and Devonian Railway, with frontage for some distance, both circumstances being most important for developing fire clay works.

The natural advantages of this estate are most favourable for successful working.

The bed of clay comes to within an average distance of about 2 ft. from the surface, and has been proved to a depth of 36 ft., but there is every probability of its extending to several hundred feet, added to which, the surface of the ground being upon a gentle slope is most convenient for working and keeping the works clear of water, which will be remarked that the celebrated fire clay deposits at Stourbridge, which yielded such extraordinary profits and made so many fortunes, lies at a great depth and is only a few feet thick.

Manufactures of this description are in constant and increasing demand, commanding exceptionally high prices—for instance, fire bricks of the best quality, for smelting furnaces sell for 45 10s. per thousand. It will be seen, however, upon reference to the estimate, that our calculation is based upon a selling price of 23 10s. per thousand, while the cost of manufacture is about 61 5s. per thousand, thus yielding a profit upon the bare manufacture of over One Hundred and Fifty per Cent., there being an extensive demand for such clay both at home and abroad.

Several of the owners of smelting furnaces have used and tested the clay from this estate, and it is only necessary to refer to the reports accompanying the prospectus as sufficient evidence of its value, it having been proved to be capable of standing a greater amount of heat than any that can be procured elsewhere.

There is ample water supply and ready means of transport to all parts of the world.

The following are the probable results for one year, based upon the most moderate calculations of profit, which show the value of investment in this undertaking:

Cost and expenses of manufacture of each 1000 bricks, at (say) £1 5s.
and cost of carriage by rail to port, at 2s. per ton on 10,000,000 bricks £15,000
Management, working, and current office expenses 1,600

Surplus balance receipts 17,000

15,000

£35,000

Taking the income returns for the manufacture of 10,000 fire-bricks per annum, at the price only of 23 10s. per 1000 being about £2 less than the selling price of fire-bricks. Revenue 235,000

Thus showing an absolute net profit for a dividend upwards of 50 per cent. upon the total capital of the company, even taking the selling price of the bricks at the most moderate estimate of profit, and without taking into calculation on the profits on sale of the clay itself, for which there is constantly a large demand, or the very large profits that may be realised from the manufacture and sale of gas retorts, fire-bricks, crucibles, and ordinary building bricks, for which there is a very large demand in the neighbourhood of the works.

The present proprietors have handed over to the company a contract for the supply of 150,000 fire-bricks to be delivered in London at a price of 85s. per 1000, and have offered other contracts for the supply of very large quantities.

The only contract entered into is one dated the 18th of December, 1872, between Messrs. John and Francis Savage, and C. L. Eatenton on behalf of the company.

The agreement and Articles of Association can be inspected at the office of the solicitor of the company, also the leases and original reports.

Applications for shares, together with the deposit, may be forwarded to the bankers or to the secretary to the company, from whom all information and prospectuses can be obtained, and where a plan of the estate can be seen.

If no allotment be made the deposit will be returned in full.

EXTRACTS FROM REPORTS.

From Report of James Pope, Mining Engineer, Redruth, dated 12th July, 1872.

For the construction of furnaces for the smelting of iron, copper, tin, &c., the bricks made from this clay will be of the greatest value, and will command the highest price in the market.

From Report of W. Barn, Town Mill Foundry, Redruth, dated 26th July, 1872.

I have used fire-clay during the last 20 years for the lining of our "cupolas" in which we smelt large quantities of iron for heavy castings, and where it is exposed to an immense heat; and I have no hesitation in saying that your clay is superior to any I have ever used, and we shall be glad to have a further supply.

From Report of Thomas Williams, superintendent, Devon Great Consols Foundry, dated Dec. 2, 1871.

The best fire-bricks hitherto used on these premises are those of Stourbridge manufacture, but I have no hesitation in saying, from the severe tests you have been submitted to, they are, in my opinion, equal or superior to the "Stourbridge."

Copies of the reports from which these extracts are taken, together with other reports upon the value of the property, accompany the prospectus.

Registration of New Companies.

The following new Companies have been duly registered:—

OLD MERRIFIELD LEAD MINING COMPANY (Limited).—Capital 2000*l.*, in 2*l.* shares.

BRAZILIAN SUBMARINE TELEGRAPH COMPANY (Limited).—Capital 1,300,000*l.*, in 10*l.* shares. For the construction of a submarine telegraph cable between Portugal and Brazil. The subscribers (who take 50 shares each) are—James Anderson, 15, Warrington-crescent; W. R. Drake, 15, Prince's-garage; Julius Brett, 2, Bank-buildings, E.C.; Daniel Good, 3, Warwick-road, Paddington; Thomas Toller, 119, Gloucester-terrace, Hyde-park; F. Yoale, 156, Fenchurch-street; Lotimer Clark, 5, Westminster-chambers; and W. H. Clarke, 6, Leinster-terrace, Hyde-park.

MIDLAND COUNTIES BREWERY COMPANY (Limited).—Capital 100,000*l.*, in 10*l.* shares. The subscribers (who take 50 shares each) are—S. Briggs, King's Norton, Worcester; J. Horton, Handsworth; A. Ludlow, Erdington, Warwickshire; R. Dixon, Wolverhampton; Wm. Loveridge, Birmingham; G. Thomson, Dudley; John Nick, Olton Cottage, Worcestershire; and T. Lester, Dudley.

LLANBEDDIO QUARRY COMPANY (Limited).—Capital 25,000*l.*, in 10*l.* shares. For the acquisition and working of the Llanbeddio Rock, in Carnarvon. The subscribers (who take one share each) are—A. F. Morgan, 4, Harrington-street, Liverpool; R. W. Roulston, 44, Castle-street, Liverpool; H. A. Colville, 1, Glaston-street, Liverpool; Thomas Lees, 10, South-street, Liverpool; John Lyon, Birkenhead; W. Johnstone, Birkenhead; and J. H. Wright, Liverpool.

HEREFORD AND SOUTH WALES WAGON AND ENGINEERING COMPANY (Limited).—Capital 100,000*l.*, in 10*l.* shares. To carry on business as manufacturers of rolling stock, &c. The subscribers (who take 20 shares each) are—George Cline, Toringstone-cross, Herefordshire; D. P. Peplow, Garston, Herefordshire; George Patehall, Allersmore-court, Herefordshire; B. P. Bidder, Neath; George Arbuthnot, 118, Belgrave-road; E. Brown, 14, Coal Depot, King's-cross; and George Llanuranc, Larkfield, Chepstow.

HARWICH HARBOUR, WHARVES, AND WAREHOUSES COMPANY (Limited).—For the construction of a pier, wharves, &c., at Harwich. The subscribers (who take 40 shares each) are—Lord Bunsford, 7, New Burlington-street; A. W. Meyrick, 54, Parliament-street, Westminster; J. G. Cobbold, Ipswich; G. Josely, Ipswich; J. Stodge, Chislehurst; W. F. Wolley, Fulham; and J. L. Reed, Mount-street, Westminster.

URUGUAY CENTRAL AND HYGHERITAS RAILWAY COMPANY OF MONTEVIDEU (Limited).—Capital, 600,000*l.*, in 2*l.* shares, of which 15,000 shares are preference, and 15,000 ordinary shares. For the construction of a railway from the right bank of the river Saint Lucia to the town of Hygieritas, Uruguay. The subscribers (who take one share each) are—E. L. Drury, 43, Weymouth-street, Portland-place; C. W. Drabble, Cambridge-square, Bayswater; G. A. H. Holt, 35, Cambridge-terrace, W.; G. R. Ryder, 1, Great George-street, Westminster; Loftus Fitzgibbon, Euston-square; C. Waring, 10, Victoria-chambers; and W. M. Caudill, 9, Victoria-chambers.

THE CITY ROCK SILVER MINING COMPANY (Limited).—Capital, 20,000*l.*, in 5*l.* shares. For the acquisition of the City Rock Silver Mine, Little Cotton Wood, Utah. The subscribers (who take one share each) are—J. H. Stahard, 7, King's-road, Bedford-row; John Simpson, Temple; J. Gibbs, 17, Henrietta-street, Covent Garden; H. May, 9, King's Arms-yard; J. J. Stallard, 1, Greenham-buildings; J. B. Wood, 13, Poultry; and C. Wallington, 1, Newington Green-road.

SILVER LIGHT COMPANY (Limited).—Capital 120,000*l.*, in 10*l.* shares. This company intends acquiring from Mr. Silber his patent rights in connection with an improved method of lighting. The subscribers are—Lord John Hay, 149, Piccadilly, 50; John Farquhar, Grafton-street, Bond-street, 50; C. E. Habright, 11, Old Broad-street, E.C.; M. de Costa Andrade, 62, Wood-street, 10; J. Wood, Fenchurch-street, 10; M. Fleming, Macqueen-street, Canby, 50; and B. Stone, 25, Victoria Park-road, 5.

ZAMORA WATERWORKS COMPANY (Limited).—Capital 30,000*l.*, in 10*l.* shares. For the purpose of erecting waterworks in the city of Zamora, Spain. The subscribers (who take one share each) are—Thomas Down, 104, Ball's-pool-road; A. F. Simpson, 1, Calogian-road, Surbiton; G. Teacual, 6, Air-street, Piccadilly; and W. J. Brown, 439, Fulham-road, Brompton.

BUCKINGHAM PLUMBAGO COMPANY (Limited).—Capital 150,000*l.*, in 10*l.* shares. For the acquisition of plumbago mines, in Divine Rock, township of Buckingham, Ottawa, Canada. The subscribers (who take one share each) are—G. J. Gray, 18, Forbes-road, Penze; Jas. Stewart, 157, Leadenhall-street; Chas. Nicholls, 308, Mile End-road; H. Fowler, 9, Clements-lane, E.C.; S. P. Winterbourne, Duckfoot-lane, E.C.; J. S. Davis, 6, Thornhill-crescent; and N. J. Drane, East Surrey-grove, Peckham.

WATSON BROTHERS, MINING AGENTS, STOCK AND SHARE DEALERS, &c., 1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

SATURDAY.—Good demand for Crebore, Grenville, West Franches, South Roman Gravel, Tankerville, South Franches, West Maria, and Hingston Down. Crebore, 3 to 3½; Grenville, 5½ to 6½; West Franches, 17½ to 18½; South Roman Gravel, 48 to 48½; Tankerville, 11 to 15; South Franches, 20 to 22½; West Maria, 27s. 6d. to 28s. 6d.; Hingston Down, 9½ to 9¾; Devon Consols, 7½ to 8; Great Laxey, 14½ to 15½; West Tankerville, 3½ to 3¾; Wheel Grenville, 5½ to 6½; Emma, 16 to 16½; Flagstaff, 15 to 15½; Utah, 1½ to 1¾.

MONDAY.—Great demand for Crebore, West Franches, West Maria, South Franches, Dolcoath, Pennerley, and Devon Consols at advanced prices. Crebore, 3 to 3½; West Franches, 19 to 20; West Maria, 27s. 6d. to 28s. 6d.; South Franches, 21 to 23; Dolcoath, 67½ to 70; Pennerley, 2 to 2½; Devon Consols, 7½ to 8; New Rosewarne, 3½ to 3¾; Hingston Down, 9½ to 10; Van Consols, 4 to 5½; West Chiverton, 11 to 12; South Roman Gravel, 2 to 2½; East Lovell, 17½ to 18½; East Caradon, 4½ to 5; Great Wheel Vor, 6½ to 7; North Roskar, 21 to 23; Wheel Buller, 15 to 17½; South Curdow, 8½ to 9; Roman Gravel, 18 to 19; Australian United, 1 to 1½; Emma, 15½ to 16½; Pacific, 1 to 1½; San Pedro, 4½ to 5.

TUESDAY.—Market active for Crebore, New Rosewarne, West Maria, West Franches, South Franches, Hingston Down, and Pennerley, at an advance. Crebore, 3½ to 3¾; New Rosewarne, 3½ to 4; West Maria, 28s. to 30s.; West Franches, 19 to 21; South Franches, 20 to 22½; Hingston Down, 9½ to 10; Pennerley, 2 to 2½; Carn Brae, 150 to 155; Cook's Kitchen, 23 to 27; Devon Great Consols, 7½ to 7¾; Dolcoath, 67½ to 70; East Caradon, 4½ to 4¾; East Van, 4½ to 5; East Grenville, 1 to 1¼; Marke Valley, 4½ to 4¾; Prince of Wales, 10s. to 12s.; Rookhope Valley, 2½ to 3; Wheel Uny, 5 to 5½; West Chiverton, 11 to 12; Eberhardt and Aurora, 6½ to 7; Emma, 15 to 16; Flag-staff, 15 to 15½; Utah, 1½ to 1¾.

WEDNESDAY.—Market moderate and quiet. West Bassett, Crebore, South Franches, Devon Consols, New Rosewarne, and Australian United chiefly dealt in. West Bassett, 11½ to 12½; Crebore, 3½ to 3¾; South Franches, 22½ to 25; Devon Consols, 7½ to 7¾; New Rosewarne, 3½ to 3¾; Australian United, 1 to 1½; Carn Brae, 150 to 155; Van Consols, 4½ to 5; South Curdow, 8½ to 8¾; South Roman Gravel, 1½ to 2; Roman Gravel, 18 to 18½; Tincroft, 56 to 58; West Chiverton, 11 to 12; Emma, 11½ to 15½; Flag-staff, 15 to 15½; Panullic Copper, 3½ to 4; San Pedro, 4½ to 5½; Utah, 1½ to 1¾.

THURSDAY.—Active market for Crebore, advanced to 3½ buyers. New Rosewarne, West Franches, West Maria, North Roskar, and South Franches also dealt in. Crebore, 3½ to 4; New Rosewarne, 3½ to 4; West Franches, 18 to 19; West Bassett, 12 to 13; Great Laxey, 15 to 16; North Roskar, 24 to 26; South Franches, 22½ to 25; Cook's Kitchen, 25 to 28; East Caradon, 4½ to 5; East Lovell, 17½ to 18½; East Van, 4½ to 5; Great Wheel Vor, 6½ to 7; Marke Valley, 4½ to 4¾; Hingston Down, 4½ to 4¾; Pennerley, 2 to 2½; Wheel Buller, 18 to 18½; Tankerville, 14 to 15; South Roman Gravel, 35s. to 40s.; Prince of Wales, 10s. to 12s.; Rookhope, 2½ to 3; Wheel Grenville, 5½ to 6; Wheel Roberts, 5 to 5½; Wheel Uny, 6½ to 6¾; Eberhardt and Aurora, 6½ to 7; Emma, 13 to 14; and Pacific, 20s. to 22s. 6d.

FRIDAY.—Active demand for Crebore, Grenville, West Tankerville, Dolcoath, Rosehall Hill, Great Laxey, and South Roman Gravel. West Maria and Hingston flat. Crebore, 3½ to 4; Grenville, 5½ to 6; West Tankerville, 3½ to 4; Dolcoath, 70 to 72½; Rosehall Hill, 32s. 6d. to 37s. 6d.; Great Laxey, 15 to 16; South Roman Gravel, 37s. 6d. to 42s. 6d.; West Maria, 1½ to 1¾; Hingston Down, 9½ to 9; Carn Brae, 150 to 155; Van Consols, 4½ to 5; North Roskar, 25 to 27; New Rosewarne, 3½ to 3¾; Great Wheel Vor, 6½ to 7; East Lovell, 17½ to 18½; East Van, 4½ to 5; Emma, 13½ to 14; Flagstaff, 14½ to 15; Pacific, 1 to 1½; and Utah, 1½ to 1¾.

From M. W. BAWDEN (Liskeard).—The mining market is less active than at the commencement of the year. The continuous rains, with the high prices of coal and other materials will seriously affect the profits of all deep mines, and cause a diminution in future dividends, unless a further advance in the tin and copper standards takes place. There is a good demand for Carnall, Devon Consols, Herodsfoot, Hingston Down, Marke Valley, South Caradon, West Chiverton, West Maria, Wheel Kitty, and Wheel Uny shares, at advanced prices.

GAWTON.—Perhaps one of the cheapest investments on the London market for British mines is the above adventure. Not many months since the property was selling for upwards of 25,000*l.* By reason of the falling off of the slopes in several parts, together with the advanced price of material, labour, and coal, no dividend was payable at the last meeting. Copper, moreover, has lately felt considerable reductions in the quotations. These combined influences have reduced the market value of the mine to 12,000*l.* or, in other words, have sent the shares down from 7*l.* to 3*l.*, a drop of 13*l.* per cent. The latest reports from the mine are highly favourable. The 105 ft. level is again improving, and likely every day to strike the rich ore under the 82 ft. level. The 95 and 82 are greatly improved also. With the enhancement of the copper market Gawton Mine claims first attention. The absurd quotation of 3*l.* per share renders the present time exceedingly favourable for investment. As a permanent property every indication is of the most favourable nature. The attention of a large and influential party is now directed to this mine, the intrinsic value of which is stated by competent judges to be over 25,000*l.* from the improved appearance in the 82, 95, and 105 ft. levels alone. Old shareholders are quite unwilling to be ejected out of their property at the present time—for they are well aware that Gawton Mine is quite in its infancy. All parties acquainted with this mine agree that it is a first-class investment. It is a favourite with the dealers and jobbers, being managed also by first-class directors, the information published weekly being always reliable—residents of the Tamar Valley being particularly sweet upon this security. There is no doubt but the market will shortly become more elastic and buoyant.

WEST MARIA AND FORTESCUE.—In the Notabilia of the *Mining Journal* a fortnight since it was stated that an improvement had taken place in the mine. This Enigma West Bassett proved to be a valuable discovery, which in all probability will lead to important results. The Capel Tor lode, in the 71 ft. west, is a very fine course of ore, yielding from 8 to 10 tons per fathom, the matrix being the same light conical kila that stretches up through the Devon Great Consols, immediately adjoining, and in which the great deposits of ore in these mines have invariably been found. A cross-cut at the 81 is expected to reach the same lode underneath the present workings in about a month from this time, which will greatly facilitate the laying open of the discovery in depth.

Meetings of Mining Companies.

SOUTH AURORA SILVER MINING COMPANY.

An extraordinary general meeting of shareholders was held, at the London Tavern, on Thursday, for confirming the resolutions which were passed at the extraordinary general meeting of the company held on Dec. 19.—Mr. SEYTON in the chair.

Mr. C. CADOGAN (the secretary) read the notice convening the meeting.

The CHAIRMAN said the notice sufficiently explained the object of the meeting—to confirm the resolutions passed almost unanimously at the last meeting. The position of the company since the last meeting had altered only in one respect—the agreement had been completed with the Eberhardt Company for crushing 6000 tons of their ore, and so keep the Stanford Mill going for at least some months. A cable message had been received, stating that the mill could be ready by Jan. 25, but a few days was of little consequence, as they had till Aug. 15 to complete the contract. With these few remarks, he would propose the confirmation of the resolution that the company be wound-up voluntarily.

Mr. WALKER seconded the proposition, which was put and carried unanimously. The CHAIRMAN then proposed—"That Messrs. Asa Phillip Stanford, a director of the company; Henry William Spratt, a member of the committee; and Chas. Cadogan, secretary of the company, be appointed liquidators, and that their remuneration be fixed at the sum of 52*l.* 10s. each."—Mr. BENNETT seconded the proposition.

Mr. PARRY (an ex-director) rose to address the meeting from the directors' side of the table, which elicited a unanimous demand that he should occupy a position in the body of the room. Having acceded to the demand, he proceeded, amidst considerable interruption, to call attention to the circular of Dec. 11, which elicited proxies, which were used in support of certain names as liquidators in contravention of the wishes of those shareholders those proxies represented, and the Court of Chancery always objected to the secretary of a company being appointed liquidator. (No, no.) He moved as an amendment that the name of the secretary as liquidator be struck out.

The SOLICITOR explained that he had taken the advice of counsel upon that point, and Mr. Jackson advised that, in order to prevent any question hereafter, it was desirable the appointment should be confirmed at this meeting, which would entirely prevent the possibility of the question of legality being raised.

Mr. PRICE seconded the amendment.

Mr. T. G. TAYLOR submitted that it was not competent for any member to propose an amendment; the proposition must either be confirmed or rejected.

The CHAIRMAN explained that the holders of the proxies referred to by Mr. PARRY had since approved the resolutions as amended, so that the objection fell to the ground.

A SHAREHOLDER stated that the puerility of the amendment arose from the fact that Mr. PARRY, after it had been decided he was no longer a director, went to the company's office and demanded to look at the books for the purpose of raising questions with which he had nothing whatever to do, and Mr. Cadogan very properly refused Mr. PARRY. (Hear, hear.)

Mr. OSMEROD thought it better to put the amendment, because the appointment of a liquidator was not a special resolution.

Mr. PARRY submitted his amendment, that the name of the secretary be omitted as liquidator, which was put and lost, only two hands being held up in its favour.

The resolution was put and carried unanimously.

The CHAIRMAN then proposed—"That the company approve of the scheme of reconstruction explained in the circular sent to the members under date Dec. 11, 1872, and that the liquidators be and they are hereby authorised to concur in the incorporation of a new company for the purpose of carrying that scheme, or any modification of it which may be approved by them, into effect; and that the liquidators be authorised to sell and transfer the property of this company to such new company when incorporated, in consideration of the allotment of shares in the capital of such new company, pursuant to the scheme on which the sale takes place."

Mr. BERGENTILL seconded the proposition. He had the most unbounded confidence in the gentlemen appointed as liquidators, but suggested that no material modification of the reconstructive scheme should be adopted without it first being submitted to the proprietors.

The CHAIRMAN explained that the significance of the resolution had merely the object in view to empower the liquidators to effect such changes as experience might dictate as necessary, but not in any way to alter the scheme of reconstruction.

The resolution was carried unanimously.

The CHAIRMAN then proposed—"That the purchase money for the interest of any dissentient member be raised wholly, or in part, by a sale of the shares, which would otherwise be allotted to such member, or out of such funds, and by such means as the liquidators and the new company may agree upon."

The SOLICITOR, in reply to questions, stated that the amount to be received by dissentient shareholders would be settled by arbitration, and it might be presumed that the basis would be the market price of the shares. There was no obligation that the money refunded by the vendors should be employed simply in exploring, and the party who guaranteed the payment was party to the present agreement.

The resolution was carried unanimously.

The CHAIRMAN said that in consequence of what took place at the last meeting the directors had been reduced to three, whereas the scheme of reconstruction required five. Two names had been handed in—Messrs. R. Towne and H. E. Ormerod.—Mr. BERGENTILL thought the more simple and satisfactory way would be to allow the first directors of the new company to be subscribers to the Articles of Association, leaving the matter to be discussed at the first general meeting.

A SHAREHOLDER suggested that Mr. Satterthwaite should be invited to resume his seat at the board. The object of the members should be to select men as directors whose integrity would add to the prestige of the new company.—The CHAIRMAN said he should be very glad to see Mr. Satterthwaite once more a member of the board. (Hear, hear.)—A SHAREHOLDER there could be but one feeling prevailing as to Mr. Satterthwaite's connection with the board of the new company promoting its interests, his name would be a "tower of strength."

An unexpressed wish having been expressed in favour of Mr. Satterthwaite's acceptance of a seat at the board of the new company.

Mr. Satterthwaite said he very deeply felt the compliment thus paid him, and had he known the discussion would have assumed this result he certainly should not have been present. He should much prefer that other names should be proposed, but if it were deemed desirable that his (Mr. Satterthwaite's) name should be added, he was willing to do what he could. (Hear, hear.)

The CHAIRMAN said that was so.

Mr. APPELBAUM said that the suit for attachment was really deal for the present, and what they had now to do was simply the replevin suit. He considered the company's chance of winning that suit as 50-50 (fifty-fifty) (Cheers.)

Mr. CAMP also said there was no doubt that the company had a good case against the Eureka Company. The company's title to the property was really first decided by the dissolution of the injunction, and the replevin suit was simply to prevent the company getting possession of the ore and bullion, so as to furnish itself with funds to meet the expenses of the suit.

A vote of thanks was then passed to the chairman and directors on the motion of Mr. APPLEGARTH, and the meeting broke up.

Capt. JOSIAH THOMAS said that in another month or six weeks the shaft would be down to 100 fathoms—the 282. There were some droppers which he supposed had been in the skin's hole, and wherewith they had previously had these droppers. They had always imputed the loss. They had very great hopes that when Dun's hole fell into the main hole a very great improvement would take place, for he had been so constantly in that district. The stope under the 282 was at one time worth as much as 100*l.* per fathom, but it only continued so for a few fathoms, and owing to that supply having fallen off the sales of tin had been diminished by about 6 tons. The dividend of 7*s.* 6*d.* was then declared, the accounts were passed, and the report adopted.

EAST GUNNSLAKES AND SOUTH BEDFORD CONSOLS.—At the quarterly meeting of shareholders, held at the offices, Liverpool, on Tuesday (Mr. F. Carse in the chair), an account of expenditure and receipts showed a cash balance of 39*l.* 1*0s.* 7*d.*; and an estimated account of payments and receipts before the meeting to be held in April showed an estimated debit balance of 36*l.* 1*9s.* 6*d.* The following table shows the results of the operations:

the property, and each has stated that a great success is certain. — at FRASER.

BISSE: TIN WORKS (DEVON). — Messrs. Trengoung and Co., owing to the death of the late Mr. R. M. Sampson, have sold supplies of tin ore for one week. They have now, however, made new arrangements for producing the produce of Cornwall and Devon a-freshly. Mr. W. J. Trythall, who has been at the firm for many years, and thoroughly understands the business, will act as manager.

SOUTH FRANCES AND WEST FRANCES BOUNDARY QUESTION.

SOUTH FRANCES AND WEST FRANCES BOUNDARY QUESTION.—We were exceedingly pleased to hear on Wednesday afternoon that the boundary question between these mines had been finally settled and agreed on by Mr. John Penrose and Mr. John Thomas on account of South Frances, and Capt. Josiah

As the remarks contained therein are based upon an extract taken from our November report, I beg to inform you that in publishing the report in question your people printed the word "lodge" instead of "lodge." The extract quoted by "A. J." should, therefore, read "The lodge has been cut," &c. In our usual monthly report to you to-day for insertion [see Supplement] this is pointed out and fully explained.

W. J. LIVINGTON, Secretary

Austinfriars, Jan. 17.

DUBLIN, Jan. 16.—Business on the Stock Exchange during the week has been rather quiet, but, on the whole, a good steady trade has been done. Consols and New Three per Cents. are firm, and have not varied more than 1/2 cent. one way or the other. Gold Stock Exchange is in demand, and has advanced 1/2. Both Five and Four per Cents. Foreign Funds are firm, and have changed much. Egyptian Bonds are in good demand. Erie shares are rather better but have been rather depressed. Russian Bonds are firm. Spanish have risen their late depression, and leave off 3/4 per cent. advance. American Bonds are firm. Bank of Ireland stock is somewhat flatter, and has declined 1/2 per cent. Hibernian shares are firm: the new issue of shares are in demand, and have advanced 7/8. Munsters are 1/4 better, cash and account. Nationals are rather better and have declined 3/4. Nationals of Liverpool are depressed, and have declined 1/2 to 3/4. Provincial oil shares are 1/2 better, and the new issues 3/4. Royal firm at last price, 25 1/2. British and Irish Steam shares are 3/4 lower, and Canadian Steam 1/2 per cent. lower. Liverpool Shipbuilding shares are 1/2. Dundalk Steam shares are flat. Mine shares are rather dull. Berehaven are inclined to droop, and have receded 4s. from the last price, but are about 4s. better. Cape Copper shares are lower, and have declined 1/2. Mining Company of Ireland shares are dull at 75; the meeting passed off rather better to-day, it was expected, and the report was adopted, and the outgoing directors duly elected as well as the auditors. Wicklow Copper shares are much firmer since the meeting last Saturday. Matters look as if they would now go on right. A new man has been added to the board, and it is expected the new capital will all be taken in due course. Mr. Archer, formerly of the Aekton Chemical Company, was elected in room of Mr. Russell. The shares of the new issue have advanced 1/2 in price. Alliances Gas shares are still dull, and have a tendency to fall. A call of 30s. per share has been made on No. 2 C and class B shares, making paid up. Tramway shares are rather better, and have advanced 1/4. Traffic is good, 300, this week over last. Railway shares are all more or less dull, and much change to notice. The coming dividends are watched for with some anxiety.

COPPER.—(Messrs. J. Pitcairn Campbell and Co., Liverpool, Jan. 14).—During the past fortnight upwards of 2300 tons Chili bars changed hands at the 89½, 10s. to 93½, per ton, and at the Swansea sale 1812 tons of ore, average prod. 11½ per cent., realised 17s. 5d. per unit. On Jan. 7 the English smelters raised their official prices £5, per ton, to 98½, for tough coke, 15s. for soft coke, and 10s. for strong shreds. On Jan. 9 the Bank rate of discount was reduced from 5 to 4 per cent. The market to-day is dull, with more disposition to sell. Quotations for West Coast copper are as follows:—

For West Coast copper are:—				
	To day.	Jan. 15, 1872.	Jan 15, 1871.	Jan. 15, 1870.
Bars.....	£98 to £99	£96 to £98	£94 to £95	£92
Ingot.....	£98 to £99	£92 to £94	£90 to £91	£87
Ore, regulus ..	18s. to 18s. 6d.	17s. 6d.	13s. 7½d. to 13s. 9d.	13s.
Barilla.....	10s. to 10s. 6d.	13s. 6d. to 19s.	14s. 5d. to 14s. 6d.	13s.

Arrival at Liverpool during the fortnight of West Coast, S. A. produce:—
 From Valparaiso, 260 tons bars, 190 tons ingots. At Swansea:—Atossa, 16 tons bars; Puma Blanca, 179 tons ore, 521 tons regulus; Uncas, from Carrizal, 630 tons regulus; Henry Bath, from Sarcos, 683 tons ores, 19 tons bars; Mañita, from Lota, 10 tons ores, and 370 tons bars.

Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at:—

	Ores.	Regulus.	Bars.	Ingot.	Barilla.
Liverpool ..	19	697	16,129	1159	15
Swansea ..	1625	2456	5,271	85	—

Total 1044 3153 21,400 1235 15
 Representing about 24,300 tons fine copper, against 11,700 tons January 15, 1872;
 24,400 tons Jan. 15, 1871; 18,400 tons Jan. 15, 1870.
 The stock of fine copper in Havre is 633 tons, and in London 7900 tons, mainly
 in the four ports of Liverpool, London, Swansea, and Havre, 32,733 tons, against
 18,663 tons January 15, 1872; 35,555 tons Jan. 15, 1871; 30,552 tons Jan. 15, 1870.

Messrs. Vivian, Younger, and Bond.—The smart advance with which the year opening has at once brought about some reaction, and as consumers have been so far from supplying themselves in the competition to realise profits on purchases, holders have now to submit to a reduction of 2½ per cent on prices met a week ago. Chillan advises still confirm the views expressed in our annual circular regarding prospective supplies, and a cablegram received 11th inst., advice charters for the fortnight ending December 17, equal to 1709 tons fine, notwithstanding the proportion of bars to furnace steel having yet come to hand. About 16,000 cwt. Chili bars good ordinary brands sold at 91½, 92, down to 90½ (with a sale of 100,000 lbs. of No. 10 bars), and 100,000 lbs. of No. 8 bars at 91½, all selling to brand and prompt. In fine foreign goods of 1900 tone, chiefly Wallas sold at 96½, 10s. denre 95½, and 97½, 10s. to 95½, 10s. two or three months prompt. In Japan, tines and sticks sold at 92½, 5s. to 91½, 5s., and rough at 90½.

Messrs. James and Shakspeare—A small lot of Australian ore at Swansea has been disposed of this week by private contract at 18s. per unit, but importers generally are not sellers at this rate, and the majority of the parcels which are held for rather fine values. In bars 1385 tons have changed hands, of which 210 tons are sold at 92½, 93½, 94½, 95½, and 96½, with one lot of 100 tons at 115½. In Utena, and good ordinary brands at 90½ to 91½, down to 88½ cash, 90½ to 92½, lots, with prompts ranging from three weeks to three months and 25 tons, R. Walker, at 91½ cash. The market has been rather irregular throughout, more especially so at the close, but this feature can easily be accounted for, as the quotations ruling last week were somewhat in excess of the actual comparative value of the article. Spite of the heavy stocks, holders express great confidence as to the future range of prices, the current belief being that the import of the present year will show a good reduction from those of 1872. A telegram to hand from Valparaiso, purporting to give the charters for the first half of the coming year, but giving no details; the usual messages, which, in particular, are not yet to hand, although overdue by six or seven days. Of Australian sales for the week amount to 950 tons, the whole (excepting 250 tons being Wallaroo coke; the prices paid ranged from 96½ down to 94½ cash, and 92½ to 94½, for deliveries one or three months hence. Japan has sold to the extent of 185 tons, of which 135 tons till at 92½ and 92½ 3s., the remainder being for rossette, at 90½ per ton; these purchases have cleared away the bulk of the existing stock. English is steady at list rates, and there has again been a moderate demand for select for America.

WHELAN AGAR.—Capt. Rogers (Jan. 14) reports—The past three months our underground men have been mostly employed in securing the shaft 70, 80, and 90 ft. below the surface level especially, as they had a very difficult and dangerous job; and, in order to make it perfectly safe, we found it necessary to use strong timber, from 1 ft. to 14 inches square, and several of them are more than 20 ft. in length. I did hope we should have been able to continue the cutting down of the shaft below the 100 at the same time this work was being done, but found it necessary to cover over the shaft in the proper place to protect the men below that it stop all the circulation of air, so that we could not succeed in working the both place. I am, however, glad to say that this work is now completed, and the shaft easily divided, and footway fixed to the 100 fm. level, so that our progress in cutting down will in future be much more rapid. It should be properly understood by the shareholders that in bringing down our engine-shaft we are by no means following the example of the former workers twisting the shaft sometimes in one direction and then in another to suit the wants of the moment, but have carried down a shaft ample size, by line from top to bottom, and still continue to do so, that we may be able to carry out the working of the mine in depth economically and with certainty in our operations. At surface a very first class 70 in. cylinder pumping engine, with three boilers of 11 tons each, has been erected, and is now completed that in three or four days it could be got ready to work. This engine of sufficient power to meet all our requirements, and I have no doubt will do our work cheaply and well. The winding engine is now employed in drawing the shaft to the surface, and is in excellent working order, to which we have a steam cap attached. The weather has been very severe for surface work, but we are getting over this difficulty, and believe it will have but little influence on our future operations. As regards the quantity of coal, I estimate that in the shafts and in the mine be carried out in a proper manner, as we intend them to be, no doubt good and lasting mine will be found in the bottom. We have sold since last count 4100. worth of spare materials, and have about 800. worth more for sale.

about 4100, worth of pure materials, and have about 800, worth more for sale.

WEST GODOLPHIN.—Capt. Pope, jun. (Jan. 13), reports—Settled on Friday last. The lode in Pressure shaft, sinking below the 40, is 3½ ft. wide, for the length of the shaft 600, per fathom; sinking by eight men (one laborer, largest set last month). The lode in the 40 ft. level, is 3 ft. wide, worth 4½, per fathom; driving by six men, at 1½, per fathom. The lode in this level, driving west of Pressure shaft, is 2½ ft. wide, worth 5½, per fathom; driving by two men, at 8½, per fathom. The lode in the rise in the back of the 30 ft. level, south-east of Pressure shaft, is 2 ft. wide, worth 20, per fathom; rising by six men, at 7½, per fathom. In No. 1 stope, the back of this level, the lode is 2 ft. wide, worth 5½, per fathom; stopping by four men, at 1½, per fathom. In No. 2 stope the lode is 3 ft. wide, worth 6½, per fathom; stopping by four men, at 1½, per fathom. In No. 3 stope the lode is 3 ft. wide, worth 6½, per fathom; stopping by four men, at 1½, per fathom. In the level driving north-west of Pressure shaft, is 2 ft. wide, worth 7½, per fathom; stopping by four men, at 4½, per fathom. In No. 1 stope, in the back of this level, the lode is 2 ft. wide, worth 4½, per fathom; stopping by two men, at 1½, per fathom. In No. 2 stope the lode is 2 ft. wide, worth 5½, per fathom; stopping by two men, at 1½, per fathom. In No. 3 stope the lode is 2 ft. wide, worth 4½, per fathom; stopping by two men, at 1½, per fathom. The lode in the winze, sinking below the 20 ft. level, south east of Pressure shaft, is 3 ft. wide, worth 5½, per fathom; driving by four men, at 1½, per fathom. In No. 1 stope, in this level, the lode is 2 ft. wide, worth 3½, per fathom; stopping by two men, at 1½, per fathom. In No. 2 stope the lode is 2 ft. wide, worth 3½, per fathom; stopping by two men, at 1½, per fathom. In No. 3 stope the lode is 3 ft. wide, worth 5½, per fathom; stopping by four men, at 2½, per fathom. The lode in this level, driving west of the cauter, on Hope lode, is 1 ft. wide, worth

though each part produces some good work for tin, I expect at the point of the ore a good improvement. In driving east on the south lode during the past

available ground between the shaft and cross-course. In the 20 fm. level, west

New Rosewarne shares have been firm during the week, and leave # 42 to 43, all paid. At the meeting, held this afternoon, the accounts showed sales of tin and copper for their quarter amounting to \$696,16., and after charging up an extra month's costs to December, and crediting as an asset the tin dressed and in course of dressing on the mine (15 tons), the liabilities over assets were a little over \$100,000, and the agent was made present to explain the disappointment and difficulties.

Subjoined are the closing quotations:—
Alamillos, 1½ to 2; Almada and Tiritó, ¾ to 1¾; Anglo-Argentine, ¾ to 5¼;
ditto, 15 per cent. pref., ¾ to 5¼; Australian, 1¼ to 1¾; Australian United Gold,
1½ to 1¾; Cape Copper, 21 to 23 prem.; Chontales Consolidated, 5¼ to 7½;

M R. R. PERCY ROBERTS,
FINANCIAL AGENT,
60, ENGLISH STREET, CARLISLE

Analyses of every Mineral Produce carefully conducted.

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

MAN-ENGINES.—The absence at many mines of surplus power applicable to the working of a man-engine and the objections to the direct action principle when worked by a separate engine have prevented the adoption of this very useful machine where it would be obviously economical. I believe it has been proposed to employ a good portable engine in such a case, and to transmit the up-and-down motion from a rotating crank by two pump crosses—that is, to return to the principle on which the first man-engines were erected. This system is still successfully at work at Przibram, and a small condensing steam-engine, worked expansively, is found to be quite sufficient to work it with the greatest safety and regularity, a brake attached to the fly-wheel controlling the engine with certainty whenever required. The man-engine works to a depth of 400 fms, and 2000 men pass up and down daily in about nine hours, and even at the present price of coal the cost for fuel would not, as I learn, exceed 2s. 6d. per horse-power per 24 hours. Can any correspondent inform me what is the smallest depth at which the man-engine has been successfully employed in Cornwall, and the first cost?—*MINE ADVENTURER; Jan. 13.*

PREVENTING EXPLOSIONS OF FIRE-DAMP.—In the *Mining Journal* of Nov. 25, 1871, you were kind enough to publish my letter concerning an improved method of dealing with fire-damp, which I have invented. I propose visiting England shortly, and should be glad to be in communication with some scientific body taking interest in these questions. I enclose my full address.—*J. FAYET; Lyons.*

LAST CHANCE.—"Shareholder" will see by a notice elsewhere that a dividend has been declared by this company. The insertion of his letter is, therefore, unnecessary.

INJECTOR CONDENSER.—During last autumn I read a notice in the *Mining Journal* of an improved injector condenser, which was said to be working well, but cannot recollect the date or the name of the manufacturer. If the parties interested in the invention will again furnish particulars, adding what has since been done, I shall be glad to be put into communication with them.—*S. H. F. C.; Penzance.*

MERZENBERG.—"A Shareholder" had better address a letter to Mr. Square, who may, probably, forward the required information.

NICKEL.—"W. M." (Lombard-street).—Amongst the more recent proposed applications of nickel is for the electroplating of printing type: the advantages claimed are that it gives a sharper impression, and does not injure coloured inks.

WEST ESQUIRE LIE.—Your reporter has inadvertently made one or two slight errors as to what I said at the shareholders' meeting, held on Jan. 7. I stated that the adit level had struck the lode 14 fms. from surface, and that the engine shaft had intersected it at a depth of 5 fms., giving us 9 fms. of reserves above adit, and, consequently, 29 when the shaft is down to the 29. Again, in reference to the issue of shares, I said that it was proposed to issue only 3000 at present, the directors having every confidence that such an amount of capital would be amply sufficient to bring the mine into a dividend-paying state.—*G. J. HAMILTON, Chairman of West Esquire Lie Mining Company.*

SOUTH CARN BREA.—During the many years I have been regularly a reader of the *Journal* I know of no case more fitting interference: than that represented by a correspondent last week on South Carn Brea, and I hope to see the matter properly taken up.—*R.*

MINING SHARES.—We are continually receiving letters asking our opinion as to the present and prospective value of shares in various mines. On reflection, it must be evident how imprudent, for many reasons, it must be to think of relying on such an opinion. The course we always recommend is to transact business through a respectable and competent broker, whose interest it is to be in possession of reliable information, and, on application, to keep their clients well and properly posted on all probable changes. Their own position and character are sufficient guarantee that they will not intentionally mislead.

REVIEWS.—"B. V."—"J. L. C."—"W. B."—"Echo" (Opinions will differ).—"J. H. R."—"Argus" (Yes).—"M." (next week).—"Reader" (Cork).—"C. B."—"P. M."—"J. Walker" (next week).—"P. C."—"T. T."—"A Debenture Holder" (next week).—"One in the Deep Level."

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

SCALE FOR ADVERTISEMENTS.—Our charge for general advertisements is—for six lines and under, 1s.; per line afterwards, 5d. Average, 12 words per line.

THE MINING JOURNAL.

Railway and Commercial Gazette.

LONDON, JANUARY 18, 1873.

COAL-CUTTING MACHINERY.

That coal-cutting machinery is making greater progress in the estimation of colliery owners than it has ever done before is becoming apparent every day. There is also in consequence a manifest desire on the part of inventors to produce machinery that will perform all that can be desired in a mine, so far as relates to the getting of coal more economically than by hand, cutting it in larger pieces, and with less waste, and doing away with the danger to which the collier is ever liable whilst following his occupation from falls of roof or mineral. Of the machines at present in use that known as the "pick," the invention of Messrs. J. and S. FIRTH, has so far been the most successful. Some eight or ten of these pick machines are now in daily use at the collieries of the West Yorkshire Coal and Iron Company, at Ardsley, near Leeds, and two at Woolley, near Wakefield. The machine, it may be said, imitates in every way the action of the collier in wielding the pick. Another invention has just been brought out which appears to have many advantages, and is in itself quite a novelty.

It is patented jointly by Mr. F. HEND and Mr. S. FIRTH. Instead of using one pick two are brought into operation by means of a compressed air cylinder or other power. The axle of one pick passes through the hollow axle of the other, and to each axle a lever is fixed. These levers are connected by links to the cross head of the piston-rod in such a manner as to make one pick strike while the other is coming out of the groove, so that the striking is continuous. The cutters are flat chisels fixed in V-grooves at the ends of the picks, and one pick is in advance of the other, but both work from the same fulcrum and cylinder. The arms of the picks are fixed in V-grooved sockets fixed to the solid hollow axles referred to, and tightened up by a disc and set screw. The tappets for reversing the valve of the cylinder are connected to a right and left-handed screw, and they are moved nearer to or further from each other by a hand-wheel and toothed wheels to vary the force of the blows of the picks. Another important improvement is that instead of being moved continuously the machine is only moved forward after the picks are out of the groove cut. This was effected by movable tappets acting on set washers fitted to the rod actuating the propelling motion, and the tappets are so set that the machine is only advanced after the picks have penetrated to the required depth.

In connection with the patent there is a great improvement in the permanent way for the rails for excavating machines. It consists of a combined chair and sleeper, the latter being of the shape of an inverted dish resting on the ballast, the chair supporting a double-headed or other rail, secured by a wooden wedge. The sleepers are held apart by tie-rods, with rounded ends, fitting in recesses in the chairs, which determine the pitch of the rails, and in a shoe-clip for securing the joint of the rail, which is secured by an iron wedge. The working with two picks, one in advance of the other, making what is called a step-cut, in the same groove appears to be the idea capable of being advantageously worked out. There are certain other combinations which are calculated to attract the attention of machinists. Every invention having for its object the doing away with the most dangerous work connected with mining is a step in the right direction, and we hope that the inventors will be rewarded for their efforts. It is evident that the time is fast approaching when coal-cutting machinery will be a necessity, not only for benefit of the miner, but as an antidote to strikes.

THE EXPORT COAL TRADE.—The exports of coal from the United Kingdom in December presented a rather considerable falling off as compared with December, 1871, having amounted to 830,370 tons, as compared with 993,053 tons in December, 1871, and 941,817 tons in December, 1870. The exports to Germany in December were 111,519 tons, as compared with 70,987 tons in December, 1871, and 124,356 tons in December, 1870; and those to France, 173,753 tons, against 226,479 tons and 113,550 tons respectively. The aggregate exports of coal—the expression including also coke, cinders, and manufactured fuel—from the United Kingdom last year amounted to 13,211,961 tons, against 12,747,969 tons in 1871, and 11,702,649

tons in 1870. The exports to Germany figured for 2,112,128 tons, against 2,396,811 tons and 1,603,749 tons respectively; and those to France for 2,191,340 tons, against 2,006,154 tons and 2,106,781 tons respectively. The exports increased last year to Sweden, France, Spain, and Italy; but they decreased to Russia, Denmark, Germany, Holland, Brazil, and British India. The value of the coal exported in December was 822,004*l.*, as compared with 531,667*l.* in 1871, and 472,382*l.* in Dec., 1870; and for the whole of last year 10,443,920*l.*, as compared with 6,246,133*l.* in 1871, and 5,638,371*l.* in 1870.

RAILWAY IRON FOR THE ANTIPODES.

The demand for railway iron on Australian and New Zealand account appears to be steadily growing in importance. The exports of railway iron to the Antipodes month by month during the last three years have been as annexed:—

	1870.	1871.	1872.
January	1119	1118	957
February	941	1120	1622
March	1427	2332	1174
April	900	3357	2173
May	212	1005	495
June	446	1546	2926
July	221	284	1757
August	727	630	1903
September	1358	225	2557
October	417	407	1964
November	256	1152	3056
December	628	964	2997
Total	8991	14,691	25,091

It will be observed that during the last seven months of 1872 there was an unchecked progress, and while the increase in the exports in 1871 over 1870 was just 6000 tons, the corresponding increase in 1872 over 1871 was 10,400 tons. The commencement of the Tasmanian Main Line Railway, the prosecution of some rather important contracts undertaken by Messrs. BROGDEN, in New Zealand, and the gradual advancement of sundry extensions in South Australia, Victoria, New South Wales, and Queensland account for the important augmentation observable last year in the Antipodean demand for our railway iron. We have said that this augmentation was important, but it was not only important, but also remarkable, since the value of the railway iron taken for Australia and New Zealand rose in 1872 to 2,011,377*l.*, while in 1871 it did not exceed 1,49,678*l.*

On all sides in Australia and New Zealand we have evidences of an earnest desire to undertake extensions of more or less importance and value. At the close of June, 1872, the Government of Victoria had expended capital on hand available for the purpose of railway extensions to the amount of 1,104,437*l.* The Victorian Minister for Works is further encouraged to proceed with extensions by the fact that in the 18 weeks embraced between July 1 and Oct. 31 last year the earnings of the existing Victorian lines were 224,222*l.*, as compared with 212,003*l.* in the corresponding period of 1871, showing an increase of 12,019*l.* As the resources and population of Victoria expand the profits realised on the Victorian lines increase also, and a recent return shows that the Victorian Government railways earned in the year ending June 30, 1872, very nearly 4 per cent. upon the capital absorbed in their construction. As the Victorian Government can now construct lines at a much cheaper rate than in 1834 or 1855, when the gold mania was at its height, and as, moreover, it can raise the necessary capital at somewhere between 4 and 5 per cent., it is not difficult to see that the prosecution of railway extensions has become a much less serious and formidable matter to the Victorian official mind. In the province of Auckland, New Zealand, the Auckland and Waikato Railway and the Kaipara Railway are both making good progress, indeed the latter is rapidly approaching completion. In the province of Nelson, New Zealand, a railway to Foxhill is at last about to be commenced, Mr. CARPENTERS, the engineer-in-chief, having been making the necessary surveys. The greater part of the capital required for the Dunedin and Port Chalmers Railway was raised in 1871 in England, and the works appear to have been prosecuted with energy during the last 18 months. This line, which will connect Dunedin, the capital of the province of Otago, New Zealand, with the sea-coast is, indeed, nearly completed, and it can scarcely fail to communicate an important stimulus to the whole province.

In Western Australia attention appears to be fairly awakened to the necessity of endowing that long torpid, but now slightly progressive, colony with a few railways. It is proposed, for instance, to carry out a line towards the eastern district, and from Geraldton to Champion Bay. At the last dates from Perth a Mr. VICTOR, a colonial railway engineer of some standing and experience, had arrived in Western Australia, from Melbourne, for the purpose of prosecuting the necessary surveys. In New South Wales the Government has for some years been struggling as best it might with a deficit, but the extraordinary animation which has been recently imparted to mining industry has greatly improved the position of the Treasury; and if the Minister of Finance—or, as they term him at Sydney, the Treasurer—is no longer hampered with pecuniary anxieties, the Government of which he is a member is clearly much more likely to regard with a favourable eye projects for railway extension. New South Wales has three great lines running north, south, and west; and the rule enforced for some years has been to extend all three of them at about an equal rate; but, of course, the state of the colonial Treasury exerts a great influence upon railway extension in New South Wales as well as in every other colony. South Australia also rejoices in an improving credit, and may also be expected to press forward with more energy with railways, which would, of course, indirectly develop the resources of the province, even if they were not immediately and directly remunerative. Altogether, railway engineers seem likely to be well employed in the Australias.

NEW QUEBRADA COMPANY.

We have been favoured with a copy of a letter addressed by a large and influential body of shareholders to their co-partners, altogether adopting and advocating the views we last week introduced, that the one and great object is to establish a railway from the mines to the sea as the only means of saving the company and ensuring its success, and that any obstructions to the formation of a railway company are directly antagonistic to the interests of the shareholders.

It being asserted on the one hand that a change in the directorate at this critical time would be most prejudicial, and on the other that such change would in no way affect the conduct of the affairs of the company, an application was made to the directors of the Bolivar Railway (possessed of the requisite knowledge to decide this question) to express their views, and allow them to be communicated to the shareholders of the Quebrada Company. We cannot more forcibly or plainly give their opinion, with which we entirely agree, than by quoting the pregnant sentence of their answer—"I (the Chairman) have now, at the request of the board, to state that the directors are unanimously of opinion that any change in the managing body of the New Quebrada Company is highly to be deprecated, pending the settlement of questions affecting the relations of the two companies now under discussion." We cannot but think that the Bolivar directors, perceiving the great difficulties that must be introduced by a radical change of the Quebrada board, would have done well if they had prevented all agitation by expressing their views at an earlier date, and we consider it would have been wiser if the dissentient section of shareholders had taken the preliminary precaution of consulting those directors, and thus abstained from acting so prejudicially to themselves and their fellow-shareholders. The shareholders should not overlook that these dissentients openly avowed the intention of substituting themselves and their nominees, and should endeavour to form a correct judgment as to whether that was not the main cause of their agitation. Now, however, that it has been demonstrated that a change of the board at this critical time is much to be deprecated, any continuance of this opposition and agitation would evidently show that it is merely a struggling for office, under pretext of benefiting the shareholders—a policy too often adopted in this ill-used company. The gentlemen who have appended their names to the letter addressed to their fellow-shareholders have invited all to record their votes in favour of the present board, and

so "support the Bolivar directors, and uphold and increase the confidence in the railway scheme." Doubtless they will receive a ready response to their application.

PRICE OF COAL.—The consumers of coal must not, in our view, look for any marked alteration in their favour upon the rate which they are now mostly purchasing fossil fuel, whether manufactured as coke. Indeed, certain of the districts will inevitably to pay more than they have hitherto given. The England district is notably in this position. There the Chase Company have put up their prices 2s. 6d. on some and other descriptions at one bound. The lower advance extended to screened slack, which has been put up from 7s. 6d. to 10s., and higher advance applies to what is designated "best deep, and lumps," which are now 16s. but 19s. per ton. It seems impossible but that a considerable advance must likewise be made upon the products of the longer worked portions of the South Staffordshire field, although at a meeting of the trade in Dudley Monday it was decided by a majority not to make any alteration. For the minority are powerful, and hold the key of the position. Further, on Saturday, the Warwickshire colliery proprietors immediate neighbours of the Staffordshire (owners) advanced prices 2s. 6d. a ton, after having been compelled to reduce the price of their men, by consenting to their remaining in the pits 9 hours instead of 10½, and working 8 instead of 9 hours. The permanent expenses of the working of mines have been increased considerably by the working of the new Act; and the present great cessation of labour at the pits, alike in Scotland and in South Wales, together with the continued working of short hours, will so greatly reduce the available market supplies that the under-supply of the market will of itself maintain its value at a high level. It is worth noting, in connection with what we have said as to the effects of the new Act, that already the colliery engine winders of St. Helens demanded an increase of wages to 5s. a day, on the plea of the responsibility imposed upon them by that Act. Then as the price of coal in South Staffordshire, circulars have just been issued by Mr. E. Fisher Smith, the representative of the Earl of Dudley, announcing a rise in his lordship's household kinds of 1s. a ton, like those of Warwickshire, the colliery proprietors of Somerset declared a rise of 2s. 6d. a ton.

THE SPECIAL RULES.—The Mines Regulation Act, now in force gives mineowners and others the first three months of the year in which to prepare new special rules; and it makes the old rules valid till that time has expired, if new rules should not in interim have been sanctioned. All this is clearly enough set out in sections 53 and 75 of the Act. Of this colliery proprietors and colliery managers are well aware; but it would seem that it is necessary that some of the men should be informed upon the fact. Act will, no doubt, work greatly to the advantage of the mine, whose interest it was obtained, and Mr. Alexander McDonald, a fair claim to recognition for the part which on their behalf took in obtaining the Act. We do not begrudge him the compliment that was paid to him on Saturday last at Leeds, on account of those services in great part, there was handed to a gift of 1500*l.* But we regret that his countrymen at Dunfermline did not consult him before they left work there last week, with giving the customary notice. If they had done so we are sure they would not have found themselves in the false position which led to their conviction by Sheriff Lamond on Monday. Brought for leaving work, they pleaded that the Coal Mines Regulation set aside existing contracts, as provision was made by it that mineowners should appoint persons to look to the upholding of the rules and the sides of mines, and to see that all was made safe before miners began work. This the men contended had not been done in their case. The Sheriff correctly held that the miners ought to have continued at work under the old special rules up to April; and sentenced one of the four men who were brought before him to 3 months, with 3*l.* 10s. expenses, or 30 days in gaol. As to the other three they were adjudged each to pay in all 3*l.* 17s., or to be imprisoned.

DRAINAGE OF MINES.—We have reason to know that the scheme for draining the mines of South Staffordshire and East Worcestershire, which will occupy the attention of the next session of Parliament, is meeting hardly anything but encouragement. It may be found necessary by one or two interested persons to lodge petitions, but this will be done, if at all done, merely to secure for themselves a *locus standi* when the Bill is in committee. The lawyers and engineers are proceeding with every discretion, and with all deliberateness. Every reasonable attempt at conciliating all the different interests is being made, and the engineering ability most needed is being called into operation in respect of the divisions of the water to which it is respectively and best adapted. Mr. E. B. Marsden, civil engineer, of Stourbridge, to whom we have often referred in connection with his extensive enquiries into the whole question understood to be giving especial attention to the surface portions of the scheme; whilst Mr. Henry Johnson and Mr. Peacock, mining engineers, who have had considerable experience in the actual draining of the mines in work, are still looking to the underground portions. With a view to enlist the practical sympathy of the mining engineers of the district generally, these gentlemen held a meeting of their order on Monday, at Dudley, and they received abundant evidence of the great interest taken in the work by everyone occupying any office of trust at the mines. The grave admission is reported to have been made that if the Bill should not be passed, two-thirds of the mines in the district now at work will be flooded, and their contents lost. Surprising as the statement may appear to some colliery proprietors elsewhere, we are quite prepared to believe that it is strictly true. It is within our knowledge that for several months past pits have had to be abandoned almost every week through the utter inability of the proprietors, with all available pumping-power, to cope with the incoming flood. These admissions are now taking place upon a rapidly increasing rate with the effect of threatening the capability of certain leading masters to supply themselves with the fuel necessary to keep their furnaces. With such a state of things existing, we can bring ourselves to believe that any individual claims will be deemed a sufficient ground for unreasonable opposition; or, if such opposition should perchance be offered, it will be allowed by a Committee of the House of Commons to operate to the prejudice of interests vast as those for whose relief the scheme has been devised.

GREAT HARVEST.—The reports submitted at the first general meeting of shareholders, to which reference is made in another column, were considered to be highly satisfactory. In the absence of the Earl of Perth and Melfort (the Chairman of the company) the meeting was presided over by Mr. W. Prole, who fully explained the constitution and prospects of the undertaking. The company's capital consists of 30,000*l.*, in shares of 1*l.* each, and it is stated that the late proprietor expended several thousand pounds in sinking four shafts, driving an adit 190 fms., and other works, by which he has opened up the various tin, copper, and blende lodes known to pass through the property, the whole benefit of which will accrue to the company. From the neighbouring mines nearly 2,000,000*l.* worth of tin has been turned out. Capt. John Goldworthy recommends certain works to be carried out, and states that if these be adopted he is of opinion that the Harvest Mine will, with good management, prove to be a mining prize. As the lodes are opened up they will be enabled to decide what power they will require for pumping, stamping, winding, &c. Capt. W. H. Wilcock is of opinion that the property can be made of immense value, yielding large returns. Capt. John Best also reports favourably. Mr. G. C. James was appointed solicitor of the company, and the Chairman having answered various questions satisfactorily the proceedings terminated with the usual complimentary vote of thanks.

THE TRETOL TIN AND IRON MINING COMPANY.—We are pleased to find that this company (the prospectus of which appeared in last week's *Journal*) is attracting considerable attention, and that the intention of the managers to avail themselves of our medium to inform shareholders periodically of the progress of operations. We understand the managing director is in Cornwall, making arrangements for the speedy erection of stamping and dressing machinery, and it is expected that the first meeting of shareholders considerable progress will have been made. There are now between 50 and 60 men employed, principally on the iron lode, and it is intended to increase this number very considerably as soon as possible. In No. 1 level, what is called the new tin lode is being driven on, and it is very satisfactory to find that the value of the lode, which is a large one, continues to be put up to, if not better than, the value given in the prospectus. In the No. 3 level they have driven across what is called the old tin lode, and are continuing the drive

ward to cut the new tin lode in this level also, and it is a remarkable fact that nearly all the ground they are driving through is producing good stamping work for tin. In connection with this it should be mentioned that in the No. 1 level the whole of the ground driven through before cutting the new tin lode also contained tin, and as the ground in the No. 3 level, which is exactly of the same character, is producing more tin than the same ground in the No. 1 level, it is concluded, very reasonably we think, that when the lode is reached it will be of a very high quality. Since the issue of the prospectus the tin lode in the No. 2 level has been sampled at a point which was not open when the original samples were taken, and the sample gives 40 lbs. of tin to the ton of stuff, or about 250 per fathom. This part of the mine is only 25 fms. from surface, and the lode is easy to work, so that it is clear that this mine has fallen into good hands, and the chances seem to be very strongly in favour of its turning out much better even than the directors have indicated in their prospectus. We may add that we have it on good authority that they consider their shares to be worth twice their nominal value, and it is only a question of time for Trefoil to be one of the best properties in the market.

REPORT FROM CORNWALL.

Jan. 16.—This has been a week of great quiescence in local mining, and there is really nothing to report of consequence. The strike in Wales has not caused as yet any positive injury in the county beyond an advance in coals, but cannot be much prolonged without having greater effect. Possibly, seeing the doubts now being cast upon the original statements concerning the value of the Queensland tin fields, but for the strike we should have already seen the next upward step in the standard.

We shall soon have an opportunity of seeing the effects of the appearance of Capt. Teague among the smelters—to some people apparently as surprising as that of Saul among the Prophets, though to us only an instalment of an intention which several of the leading tin producers have long expressed. It is very long since there has been any substantial reason why the miner should not make white tin as well as black. There was a time when the miner only raised the ore, and the dressing was in other hands. But long before that the ancient tinner carried on all the processes of his calling, from getting the ore to refining the metal; and circling ages, though under different auspices, have brought us round again to much the same position. The Bissoe Company, which Captain Teague has joined, is now about to resume active operations, dropped for awhile in consequence of the death of Mr. Sampson.

We are glad to see that Mr. T. S. Bolitho has called the County Committee together to consider the present aspect of the mines rating question. The meeting is called for the 21st, and it will be perfectly open for the attendance of all interested. Now is the time for Cornwall to speak out strongly and distinctly, so that the present session shall not pass without the settlement of the question upon the only equitable and satisfactory basis—the rating of dues.

REPORT FROM SCOTLAND.

Jan. 15.—The Warrant Market has continued active during the past week, with considerable fluctuations in price. On Friday it touched 121s., and closed at 122s. 6d. On Monday it opened at 123s., and closed after a good business, at 126s. On Tuesday the price touched 127s., from which point a smart reaction took place to 124s.; closing a shade firm, sellers 124s. 6d. cash. To-day the opening price was 125s., and a good business was done up to 127s., closing at that price with sellers over. The shipments and the demand, generally, are good, considering the season of the year and the high prices. The undernoted are the best quotations I can give for makers' iron, but they are very high and very irregular on account of the serious interruption to the production which still continues:—

	No. 1.	No. 2.	No. 3.
G. m. b., at Glasgow (deliverable alongside)	125 0	123 0	121 0
Gartsherrie ditto	126 0	124 0	122 0
Coltness ditto	127 0	125 0	123 0
Summerlee ditto	128 0	126 0	124 0
Carnbroe ditto	129 0	127 0	125 0
Lungloan, at Port Dundas ditto	130 0	128 0	126 0
Caldar ditto	131 0	129 0	127 0
Glenzarnock, at Ardrossan ditto	132 0	130 0	128 0
Eglinton ditto	133 0	131 0	129 0
Dumfries ditto	134 0	132 0	130 0
Carron, at Grangemouth, selected, ditto	135 0	133 0	131 0
Rhotts, at Leith ditto	136 0	134 0	132 0
Kinnell, at Boness ditto	137 0	135 0	133 0

	SHIPMENTS.	Tons
Week ending Jan. 11, 1873	11,088	
Week ending Jan. 13, 1872	10,916	

Increase	1,072
Total decrease since Dec. 25, 1872	2,365

	Tons
Imports of Middleborough pig-iron into Grangemouth:—	
Week ending Jan. 11, 1873	2,520
Week ending Jan. 13, 1872	2,470

Increase	250
Total decrease for 1873	227

An advance of 20s. a ton has been declared in all kinds of Finished Iron, the increase being limited in the meantime, to prevent purchasers withdrawing from the market. Bars are in good demand, and makers hold very firmly to the advance when they do not quote above it. Nail-roads are also in extra demand, and are not easily to be had. Angles are required for, but buyers are rather shy just yet; while plates are held easier than the other descriptions of Bar Iron. If the pig-iron and coal trades were more settled makers of finished iron would enter more freely into forward contracts, which they are declining meantime to do.

Owing to the colliers being partially on strike and partially at work the Coal Trade is apparently brisk, being limited by the output of those pits which are working. Two or three times things have looked as if the pitmen were going to resume work *en masse*, and as often has the hope been disappointed. In several districts ejectments from houses have taken place; and in others, miners have been subjected to fine and imprisonment for intimidation, desertion of service, and other overt acts of an illegal character. This is to be regretted, especially when it is considered that the reduced wages offered the colliers are from 25 to 30 per cent. in excess of those paid more skilled workmen. We hope to hear of the last of this strike before the week closes.

The new "Special Rules" have also been made a "bone of contention," but one of our sheriffs has shown that three months grace have been allowed to carry out some of its provisions. Before Sheriff Lomond, at Dunfermline, yesterday, four miners were charged with leaving work without giving due notice. The defence was that certain provisions of the Mines Regulation Act had not been complied with by the employers of the men, and that their contracts were thereby set aside. The sheriff over-ruled this contention, and fined the men in various sums, with expenses.

With the interruption to output the shipments of Coal from the Scotch ports for the week only amounted to 10,343 tons, against 23,702 tons in the corresponding week of last year, and the trade has been diverted into American channels.

As a proof of the great enhancement of all kinds of fuel, there were sold, by public roup, at the collieries, Wishaw, which belonged to the late Mr. Archibald Russell, an immense quantity of Coal Dress, which had been allowed to accumulate, for want of sale, at a time when the material and colliers' wages were at a different figure. Numerous owners of public works and dealers appeared, and the result was a speedy clearance at prices ranging from 2s. 7d. to 4s. 8d. per ton—average about 4s. The buyers, over and above the price, undertook delivery of the same at their own expense. Within the past two years the auctioneers had difficulty in selling a better article at 8d. per ton. The price for 24 cwt. is just now 10s. to 11s. here.

ASSOCIATION OF ENGINEERS IN GLASGOW.—At the usual monthly meeting of this association Mr. A. A. Hadden, C.E., read an excellent paper on "The Calculation of Roof Strains," in which, commencing with the consideration of the forces and resultant strains acting in the simplest forms of roofs, he proceeded to explain those acting in roofs of a more complex nature, showing how the principle of the triangulation of forces, either directly or through means of its developments, was applied in ascertaining the strain on every part of a roof. The paper was illustrated by drawings of the diagrammatic solution of the cases under consideration, with various specimens of roofs constructed and in course of construction.

The Fife Coal Company (incorporated in September last) have declared a dividend at the rate of 15 per cent. per annum. The Shotts shares have suffered from the strike, but are again advancing. Tharsis down nearly 40s. on the week, and Morbella Iron Ore and Emma are lower. Monday was settling day.

PRESENTATION TO MR. ALEXANDER McDONALD.—On Saturday, at the Queen's Hotel, Leeds, a purse containing upwards of 1482l. was presented, on behalf of the miners of the United Kingdom, to Mr. Alexander McDonald, president of the National Miners' Association, "as a recognition of the services rendered by him to the miners of the United Kingdom in obtaining legislation for the protection of the lives and health of the workmen, along with the reduction of their hours of labour, and the education of their children," &c. The testimonial

has been contributed to by miners in all parts of the kingdom, and also by Lord Kinnaird, the Hon. A. Kinnaird, M.P., Mr. Samuel Morley, M.P., Ald. Carter, M.P., Mr. J. Dodds, M.P., and other gentlemen. Mr. H. K. Spark (Darlington) was the chairman, and he was supported by Mr. Flimston, Alderman Carter, M.P., Mr. George Howell (London), Mr. W. Pickard (Wigan), Mr. W. Crawford (Durham), Mr. T. Burt (Northumberland), Mr. J. Dixon (Normanton), Mr. W. Brown (North Staffordshire), Mr. Normansell and Mr. Casey (Barnsley), &c.

TRADE OF THE TYNE AND WEAR.

Jan. 16.—The Coal Trade, on the whole, continues very good and steady, and numerous contracts have been entered into at prices which, though considerably above the contracts of the year, are yet very much below the current rates at present paid for quantities got daily at the works. This appears to be remarkable, and it is clear that the price of coke and coking coal is exceptionally high; no other kind of fuel commands relatively such a price as coke at present, and the reason for this must be found in the immense increase and expansion in the iron trade, and to the fact that coal producing good coke is only found in very limited quantities. The seams producing good coke are generally of moderate thickness, and thin seams only extend over limited areas. The question of good seams of coal being found in the lower parts of the Durham basin becomes every day more important, but as a good coking coal has actually been found, and also been worked at Felling Colliery for some time, the seam lying at a depth of about 80 fathoms below the Hutton seam, it may fairly be assumed that this seam will be found over the greater portion of East Durham, and it only remains to prove its existence or otherwise at other important points by trial sinkings or borings. The same seam has been opened out at the Ouston, Pelton, Framwellgate, and other collieries, but at the eastern part of the field no seam has been proved below the Hutton seam. No doubt this coking seam, if lying beneath the Hutton seam on the East Coast line, and underneath the sea, will lie at a great depth from the surface, but it may be expected to be of very good quality at that depth, and any difficulties connected with the depth of the coal can, no doubt, be overcome by the powerful means of ventilation now available.

The demand for chemicals of all kinds is very good on the Tyne and Wear at present, and large shipments have been made lately, especially to the American Continent. A good year in this very important, especially important, trade on the Tyne is confidently looked forward to, prices are very firm, and are also rising.

The Iron Trade and all its branches continue satisfactory, and the Engine and Foundry Trades of the district are also very good; most of the trades have now got fully into working order again, and in most cases they are well off for orders, and a good business year is generally expected. The demand for marine engines has improved much of late, and most of the engine-shops are very full of orders.

On the whole, the new Mine Act is working smoothly so far, but the men and the masters have come into collision at the Stella Collieries respecting the hours of working. We give a detailed account of the case below. It will be seen that it was tried before the county magistrates on Tuesday, at Gateshead, and they decided in favour of the masters on the grounds stated, the men being fined 6s. 6d. in each case, including costs. As to the mine managers' certificates, little progress has been made yet, although many who have made applications for certificates have been refused. As to the merits of these cases, of course we can give no opinion; many of the parties are, as might be expected, very indignant respecting the refusal of a certificate, but they will have the power to demand an examination as to their qualifications when a board is formed for the purpose. This question has been much discussed, and the opinion pretty freely expressed that no time should be lost in forming the board, so that those who have been refused certificates, and also numbers of young men who have not filled office, may have the chance of passing the examination necessary.

A case of some interest came before the Gateshead County Police Court on Monday, when eleven miners were summoned, charged with leaving their work at the Stella Colliery without having given due and proper notice. The evidence against the men went to show that, on the 4th inst., the men on the fore shift came to the colliery to go down at 5 o'clock A.M., instead of 4 o'clock, at which hour it has been the custom for several years for the fore shift to go down the pit. As the men intended that it was their intention to begin work at that time in future, one of the undersheriffs refused to allow them to go down the pit, and in consequence of this the pit was laid idle the whole of the day. For the defence it was stated that the men afterwards held a meeting, and resolved to go to work at the old time on the following Monday, and had accordingly done so. It was also admitted that the men had worked the following Saturday, which was an off-day, and had thus made up the lost time, and also that the men had intimated to the managers a few days previously that they intended to act as they had done. The solicitor for the prosecution, however, argued that they should have given a written notice of their intention, and then they could have left the place in a proper manner. The magistrates then retired, and in a short time returned, when they fined the defendants 1s. and costs, which amounted to 6s. 6d. in each case.

REPORT FROM THE NORTH OF ENGLAND.

MIDDLESBOROUGH, Jan. 16.—There is every likelihood of the briskness that now animates all departments of the Cleveland Iron Trade being maintained for some time to come, and there are not a few who regard it as strongly probable that the average quotations for the current year will be somewhat over those of the unprecedentedly prosperous year that has lately terminated. There are not a few data upon which such a hypothesis may very reasonably be grounded. The effect of the operation of the New Mines Regulation Bill will be to reduce the output of coal and ironstone very considerably. It is usually calculated that the output will be reduced by fully 10 per cent. I scarcely think that is a fair computation, at least as compared with last year. It must be remembered that for a considerable portion of 1872 both coal and ironstone miners systematically restricted their production, and that in spite of the opening up of new pits and mineral fields the supply of minerals was often so inadequate as to threaten the blowing out of the blast furnaces. Now, it is a fact that the supplies of coal and ironstone are coming in more regularly during the past fortnight than they have done for some time, and the impression is fairly warranted that, duly discounting the probabilities of strikes and disputes at individual collieries and mines, the miners at their present rate of wages are likely to work at least as well as they did last year, and probably better. There is some immediate danger of a rupture between coal owners and colliers in South Durham, the latter having preferred a request for an advance of 15 per cent. It is more than likely a compromise would be best for both. There is no danger of a sudden or considerable fall in prices of coal which as firm as it ever has been at 20s. for best household, and 15s. to 18s. per ton for inferior qualities, while coke is selling at 40s. per ton, and the Durham miners urge that the standard of their wages is below that of the Scotch miners, who have been earning 10s. per day of eight hours for some time past. A good deal of interest is felt in the proceedings of the Trades' Congress which is sitting this week at Leeds, and which was appropriately inaugurated by the presentation to Mr. Alexander McDonald of a purse containing upwards of 1400l. The chair was occupied on the occasion by Mr. Henry King Spark, a large mine owner in South Durham and Cumberland, who is noted for his intelligent and sound views on questions that affect the relations of capital and labour. Few men are so familiar with working class feelings and interests, and we believe that at the next general election Mr. Spark is likely to contest successfully the seat now held by Mr. Edmund Backhouse, M.P.

There was a fair amount of business done on 'Change at Middlesborough on Tuesday. No. 3 was sold at 110s. per ton, and other numbers were placed in proportion. On the whole, prices are inclined to stiffen, and, seeing that stocks are so very low, and that the demand remains so active, it is more difficult to book orders, except at a considerable advance on the prices quoted a fortnight ago. Finished iron likewise exhibits an upward tendency. Common bars are now quoted at 11l. to 12l.; and best bars 12l. 10s. to 13l. 10s. Plates and other qualities and descriptions of shipbuilders' iron are in much request, but when the different new works now being erected in the district for the manufacture of malleable iron are completed there will be less difficulty in procuring this class of iron. Foundries and engineering works, without exception, are as busy as they can be.

REPORT FROM MONMOUTH AND SOUTH WALES.

Jan. 16.—Another week has passed, and the great strike still continues; when it will come to an end it is quite as difficult to tell now as when it commenced. There seems to be not the slightest prospect of the masters and men coming to an arrangement. Nothing has been suggested on either side that is satisfactory to the other, and all mediation by "outsiders" has been unsuccessful. The men still hold out for arbitration, and it must be admitted that they have public sympathy to a great extent on their side. The masters, on the other hand, strongly object to arbitration, and show beyond a doubt that they wish to be understood to "know their own business," and will not be dictated to. Their object is to crush the Union of the men, for the time has come when they must put a determined hand upon it, or it will be too late. There have been many strikes in the district before, and the masters have generally had it their own way in the end. Despite the men's Union, and all promises of

support, they are not likely to be the winners this time yet. There is, in fact, little chance of their winning, and, whether the strike lasts three weeks or three months, I feel pretty confident that the result will be the same. Even if the Union pay the men 10s. per week, and so much in proportion for their children, the men who will be entitled to receive the payment will not by any means include the whole on strike. There will be thousands left unprovided for; among those great destitution must be expected. The ironworkers are not so well prepared for the strike as the colliers, and, therefore, are less determined to resist the masters. The fact is, the majority of the colliers would willingly resume work to-morrow if they might. Many of them have already applied personally to be taken on, but of course unless the men as a body accept the masters' terms the works cannot be set going again.

While this state of things last it will be almost out of the question to be able to make any full and accurate statement as to the position of the trade. Virtually, indeed, the great iron-making industry is suspended in this district. It is true there are some small works in operation still in remote parts of the district, but these cannot be said to by any means represent the iron trade of South Wales. The lion establishments are at Merthyr, Aberdare, Dowlais, Rhymney, Tredegar, Ebbw Vale, and Blaenavon, and these are all at a standstill, and one by one the great blast furnaces are being blown out. Notwithstanding this great stagnation, however, some insight can be had as to what course the trade is taking. The improvement which was expected is gradually taking place, and prospects are encouraging. The demand for iron is likely to be as extensive this year as last, and there is a probability of prices rising again to the rates quoted then. The enquiry for rails more especially is improving, and prices are higher than they were a month ago. In other districts rails are again quoted up to 11l., but I do not know whether these quotations are obtained or not; at any rate, there is little doubt that buyers would have to travel far to get rails under 9l. The natural conclusion is, that the manufacturers who have their works idle have not booked any contracts this year, but there is little doubt that they have such understanding with their customers that they will bring them important orders when the works go on again, although no actual engagements may be entered into in the meantime. Sheet iron is also in better request. As to the Tin-Plate Trade there is nothing new to report. There is a fair steady enquiry, and the quotations fixed at the Quarterly Meeting are adhered to.

Notwithstanding that there are thousands of colliers idle there is a pretty large coal trade doing still in this district. Most of the collieries unconnected with the ironworks are still in employ, and, with the competition of the great ironmasters cut off, those colliery owners are now doing a remunerative business. The demand for steam and house coals is brisk, and prices still evince an upward tendency. As the colliery proprietors have no difficulty in finding ready customers for the largest quantities of coal they can put out of their pits they keep the collieries on the fullest possible work. Some, but not many, of the strike colliers have been taken on to increase the get.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Jan. 16.—The Earl of Dudley, Messrs. Barrow, and other leading firms have this week formally notified, by the issue of circulars, an advance of 1l. per ton on finished iron, raising Earl Dudley's standard to the basis of 13l. 12s. 6d., and that of the other principal firms to the basis of 13l. for bars; sheets and plates are still to be subject to special agreement. Second-class houses are asking 12l. for bars of a quality which might have been purchased six weeks ago at 10l. per ton. Sheets (singles) were sold yesterday at Wolverhampton, and to-day in Birmingham, at 16l. 10s. to 17l. per ton. Plates, angles, T, and rivet iron are in strong demand, indicating a buoyant trade doing in the engineering ironwork branches of manufacture. The tone of the iron market, though firmer, has a more settled aspect than we have been able to report for some time past; and there seems to be a disposition on the part of the ironmasters to make no further change in price at present, unless driven to do so by the great and increasing cost of production. The market for pig-iron is very firm. Best brands of native all-mine are 6l. 15s. to 7l., Earl Dudley's price exceeding even the latter figure. Barrow grey forge pig is selling in this district at 7l. 10s. per ton short weight, equivalent to 8l. per ton if sold by long weight. But for the great scarcity and dearth of fuel several additional furnaces would be put into blast in South Staffordshire; but under present circumstances the production of iron, whether in the pig or finished state, is barely remunerative even at the existing high prices.

The following circular has been issued by the general manager of the Cannock Chase Colliery Company:—"We beg to inform you that the prices from this date (Jan. 13) delivered into boats at Anglesey Branch, Brownhills, and at Heinesford Basin, Cannock, are as under—Terms cash monthly, less 1 1/2 per cent. if paid before the end of the following month: Best deep coal and deep lumps, 19s. per ton of 2840 lbs.; deep rough slack, 11s.; best shallow coal and lumps, 18s.; seconds and hard, 15s.; and fine slack, 10s." This is an advance of 2s. 6d. on the lowest quality of slack, and of 3s. on best coal. A similar advance has been made on household coal in the Tipton district, but the coalmasters at a meeting, held on Monday, decided to make no further change at present in the price of forge coal.

A new joint-stock company has been registered, under the title of the Mid-Cannock Colliery Company, to develop a large mineral area between the towns of Cannock and Churchbridge. The existence of coal has been proved, and it is pronounced of excellent quality. The capital of the new company is fixed at 50,000l., in 20l. shares, but it is not known yet whether any portion of the shares will be offered to the public.

Mr. J. N. Brown, C.E., has issued a circular announcing his intention to retire at Lady-day from the post of general manager to the Cannock and Rugely Colliery Company. Mr. Brown, however, will continue to practice as a consulting engineer and mining surveyor, and will reside in the South Staffordshire district.

The loose system hitherto prevalent in the gauging of coal boats on the canals of South Staffordshire has frequently been condemned, and the Birmingham Canal Company have taken a step which will go far towards the introduction of greater accuracy in this respect. The company have decided to prohibit the navigation of any boat on their canal the exact capacity of which has not been ascertained and legally recorded on a metal plate fixed to the boat. Fair traders will not be affected by this change, but only those whose boats were of such large dimensions that accuracy in gauging is well nigh impossible. A fair trading boat is 60 ft. 6 in. long, 6 ft. 10 in. wide, and tapers of 8 ft. at each end. Such a boat will carry 21 tons, of 2520 lbs. to the ton.

The operation of the Mines Regulation Act is being sensibly felt in this and the adjacent districts, and especially those clauses which restrict the employment of women and children. At Dawley (Shropshire) the bankwomen had by some means arrived at the belief that the Act provided for them a full day's wage for the half day's work on Saturday, and also that they were to have a longer time allowed them for meals. On hearing that they had been misinformed they manifested considerable "feeling," received their first week's wages under protest, and last week they assembled to the number of 300, and held quite a demonstration. After hearing a few words of explanation from Mr. Rawson, however, they seemed more satisfied, and have since, with but few exceptions, resumed their work. It did not appear likely that the half-time clause will be adopted at all extensively in the Black Country, a large number of children having been dismissed without the option of becoming "half-timers."

The North Staffordshire iron trade has considerably improved since the quarterly meetings. Some large orders for crown bars have been placed at 12l. per ton, the firmness being upheld by the great cost of production. Most of the pig makers are well sold on account of the produce of the current quarter, the prices ranging from 4l. 15s. to 5l. 5s. per ton. Iron ores are firmer at 19s. to 22s. for furnace red mine, and 22s. to 25s. for picked puddle mine.

The Earl of Dudley has advanced the price of household coal 1s. per ton all round; the current quotations being as follows:—Thick coal, best, 20s. 6d.; common, 16s. 6d.; lumps, 15s. 6d.; black, 14s.; screenings, 11s.; black ditto, 10s. 4d.; engine-slack, 7s. 6d.; ditto, black, 7s. Heathen coal: Large, 20s. 6d.; lumps, 15s. 6d.; screenings, 11s.; Brooch coal, mixed, 17s. 6d.; screenings, 14s. 6d. per ton. There is no change in the price of forge coal. It is commonly reported to night (Thursday) that the collieries in the Dudley district intend giving notice on Saturday for an advance of 1s. per day.

Sandwell Park Colliery Company.—A 100l. share (70l. paid) in this company was sold on Wednesday, in Wolverhampton, by public auction, and realised 200l.

RAILWAY CARRIAGE FOR THE PRESIDENT OF THE CHILIAN REPUBLIC.—Messrs. Brown, Marshall, and Co. (Limited) of the Britannia Railway Carriage and Wagon Works, Saltley, have just completed a magnificent saloon railway carriage for the use of the President of the Republic of Chili. The carriage is 24 1/2 ft. in length by 9 ft. wide, and presents an extremely elegant appearance. The lower part of the body, which is painted a rich lake colour, bears the arms of the Republic, while the upper portion is painted of a light salmon colour, relieved with gilt mouldings. Inside the carriage is fitted up most superbly, the saloon being entirely lined with satin-wood, inlaid with ebony and teak-wood, and relieved by richly carved mouldings of walnut wood. The furniture is of walnut upholstered in morocco, and comprises a sofa, easy chairs, an escritoire, console tables, and a large table in the centre. At one end of the carriage is a retiring

room for ladies, the furniture of which is of walnut, covered with richly flowered yellow silk. The roof of this compartment is covered with white watered silk. A lavatory and other conveniences adjoin this room. The whole of the windows of the carriage are covered by blue silk curtains. A rich velvet-pile carpet covers this floor, and everything is finished off most elegantly. A small compartment for servants completes the arrangements of the interior. Ample ventilation is secured by various novel appliances, and the carriage is lighted not only by lamps in the roof, but by swing lamps of choice design. On the whole, this carriage takes rank as one of the most splendid productions of the Britannia Works.

The pit girls under the Liffeshall Company struck work on Monday, and proceeded in a body, about 50 strong, to prevent what few remained at work from proceeding with it. Three of the ringleaders were brought up in custody before the Wellington magistrates, and upon a promise to refrain from any lawless proceedings for the future, backed by a recommendation from Mr. E. Jones, the company's manager, were discharged on their own recognizances to come up for judgment if called upon. Most of the girls have resumed work, and at the present time there is no apprehension of a future outbreak. The cause of complaint appears to be the shortening of hours under the new Act, leading to a corresponding decrease in their wages.

An adjourned meeting of coalmasters was held at the George Hotel, Walsall, on Wednesday, for the purpose of considering what steps should be taken to raise a fund to assist Messrs. Morgan and Starkey to meet the enormous expense incurred by them in recovering the bodies of their unfortunate workpeople from the inundated workings of the Pelsall Hall Colliery. Mr. T. Checkley presided. In the course of the proceedings it was stated that since the accident Messrs. Morgan and Starkey had spent more than 1000*l.* on the operations necessary to recover the bodies; and it was represented that, taking into account the unreserved way in which—while there was a hope of getting the men out alive—they placed their resources, pecuniary and otherwise, at the disposal of the experts who went to their help, and the forgetfulness of self which since that time they had devoted themselves to the task of recovering the missing corpse, they were entitled to the most generous and hearty aid from the trade and general community, in their noble efforts to discharge a public duty. A committee was formed, with Mr. T. Checkley as chairman, Mr. T. Neighbour, Wyrley-Cannock Colliery, as secretary, and Mr. F. Parkes, Birchills, as treasurer, to bring the claims of the case before the public and the trade. Promises to the amount of 170*l.* were announced.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Jan. 16.—There has been no change during the new year at the lead mines in Derbyshire, the output of ore being of an average character; and although the county is about the oldest in the kingdom, so far as the production of ore is concerned, yet it has long been in a state of *status quo*; indeed, some five or six years ago as much ore was raised as there has been recently, the quantity for some time past averaging very little more than 6000 tons per annum, and from which not more than 1000 ozs. of silver have been extracted. On the other hand, the coal mines are rapidly increasing in number and importance, and from their proximity to London are fast absorbing the trade to that place, so far as the railway traffic is concerned. The prosperity, however, which has attended the coal interest during the past year has led to the miners' receiving extraordinary high wages, and has made some of them insatiable in their demands. Only last week at several pits the men and boys turned out—some for an advance, others for the limitation of the working hours to eight per day. In most instances the demand has been conceded, and work resumed. During the month of December there was a falling off at several places in the quantity of coal raised and sent away. Thus, whilst in November there was sent from Clay Cross to London 27,328 tons, in December it had fallen to 26,027 tons, and there was a similar reduction at most of the other collieries sending in the same direction—a considerable item, when it is considered that from the Derbyshire coal fields more than 2,000,000 tons are annually sent to the metropolis. At the works and collieries at Staveley, about the largest in the county, a very good business is being done, not only in pig-iron but in castings, especially in pipes, a speciality peculiar to the works so long and so successfully carried on by the late Mr. Barrow, and which have now attained a still higher position since they became the property of the present company and have been under the control of the able managing director, Mr. C. Markham. At the works at Colnor Park and Alfreton there has been an excellent trade done not only in girders and machinery, but in most descriptions of castings. In the same locality also a great deal of coal is being raised, a considerable quantity being sent to the London market. Langley Mill, some 12 miles from Staveley, promises to become a most important centre of the iron, steel, and coal trades. The vast works of Cummell and Wilson, where several Bessemer converters will shortly be in operation, are now fast progressing towards completion, and will find employment for some 600 or 700 hands. The Messrs. Lucas are also doing a large trade, and will shortly open out a new colliery. Those additions to the ordinary industries of the locality have led to the Midland Railway Company laying out a loop line connecting the works with the main railway, and which will be of great advantage.

The iron and steel works in Sheffield are now doing very well, and the prospects of the trade of the year are in every way most encouraging. The heavy armour plates, for which the town is noted as excelling all others, and between which and the heaviest cannon, and shot, and shell so many fierce, yet bloodless, struggles have taken place at Shoeburyness, are just now in very brisk demand for the home and other Governments. They are required not only for ships, but for defensive armour for shields for coast and other purposes. The mills are all running full time. Ordinary ships and boiler plates are also in request, and such is the case with regard to ordinary rails, points, and springs. Makers of every description of Bessemer appear to be quite as busy as they were during any part of the last year, and are said to have very large orders in hand, especially for rails, springs, tyres, crank axles, and ordinary billets of the same material are also being largely produced. The malleable works, especially the well-known firm of Crowley and Son, have had a long and busy season, and the new year has seen the extensive works at Meadow Hall, completed last year, in an active state. Cutlery manufacturers find themselves in a healthy position, having plenty to do both on home and foreign account, but there is some little agitation amongst one portion of the men for an advance of wages. The collieries near to the town are now doing very well, and the output that was made about an expected advance in the price has subsided, and the rates remain unchanged. A large quantity of coke is being made, and some of it is being sent to the furnaces in the Cleveland district.

In the South Yorkshire district there is nothing new to report, so far as regards the iron trade or mining operations. The output of pig-iron is the same as it was at the close of the year, whilst the demand for ordinary rails, plates, and sheets is such that the mills have plenty to do. An economical mode of lighting the bottom of collieries with gas by means of steam-jets, and patented by Messrs. Huntress and Co., is making great progress, having been recently put down at a large number of places. The coal traffic continues to rely brisk, although there is scarcely so much going to London as there was during the corresponding period of last year. Shipments from the Yorkshire ports are not so extensive as they have been, there having as usual been a considerable falling off in the tonnage being sent to North of Europe from Grimsby. Engine fuel is in very good request, especially for Lancashire.

There was a highly respectable gathering, on Saturday, at the Queen's Hotel, Leeds, on the occasion of a presentation to Mr. A. McDonald of a handsome silver watch, filled with gold and notes to the value of 1400*l.* The chair was taken by Mr. Spinks, of Darlington, and amongst those present were—Mr. S. Plimsoll, M.P. for Derby; Mr. Alderman Carter, M.P. for Holmes; Mr. J. Normansell, Mr. Casey, Mr. Cranford, and many others. The presentation was made by Mr. Normansell in a very neat and effective address, in which he briefly reviewed the services of Mr. McDonald, and the long years' service he had given to the miners. Mr. McDonald acknowledged the valuable testimony paid to his services, and traced the legislation which from time to time had taken place with a view to bettering the condition of the working miner. The other speakers were Mr. Alderman Carter and Mr. Plimsoll. An elegant cold collation was then served, and to which a large party sat down.

A proposal made by the Council of the South Yorkshire Miners' Association that in carrying out the 54 hours work for boys between 12 and 16 years they should not be in the pit more than 9½ hours for 5½ days and 6½ hours on Saturdays, or be divided into six equal parts of 9 hours each, has not been agreed to.

REPORT FROM LANCASHIRE AND CHESHIRE.

Jan. 16.—The agitation against the amalgamation of the London and North-Western and Lancashire and Yorkshire Railway Companies is again commencing in the Lancashire towns, several of which are taking advantage of the measure passed last year giving power to boroughs to pay the cost of opposing the Bill out of the borough funds. At Liverpool the town clerk has presented to the Council an elaborate report on the subject. A memorial has been prepared and a request has been issued to other towns affected by the amalgamation requesting them to join in a deputation to the Premier on the subject. The question was discussed at a meeting of the Wigan Town Council yesterday, and special reference was made by some of the leading members to the changes that had taken place since the existing management between the two companies. It was complained that trains had been discontinued, that the service was less punctual, and that the companies were by no means consulting the public convenience in their arrangements; and it was also pointed out that many towns were favoured in their rates, and that the loss of competition had proved most unsatisfactory. It was resolved to oppose the Bill at the cost of the rate-payers, and a special resolution was passed instructing the parliamentary committee to oppose strenuously the general principle of the amalgamation.

The alteration in the "play-days" and "pay-days" at the South-west Lancashire collieries has not so far been carried out with any degree of satisfaction to either masters or men. The object was by paying on Friday evening to let the play-day close the week instead of allowing it to take place on the following Monday, but the men have for the most part taken both the Saturday and the Monday, and this has made matters worse. The whole thing needs the cordial co-operation of masters and men to carry it out effectually, and this is not easily attainable with the high rates of wages and profits at present.

In connection with the Wigan Fairmery Exhibition, the Wigan Town Council yesterday unanimously resolved to invite the Queen, or such other member or members of the Royal Family as Her Majesty should be pleased to represent her on the occasion, to take part in the opening ceremony. The institution will be a great boon to the mining district of which Wigan is the centre, and the movement in its support has become exceedingly popular.

A serious case of negligence at a colliery was before the Leigh magistrates on Monday. James Ryley, a furnace tender at the Wigan Coal and Iron Company's pits in West Leigh, was on the 3rd inst. found fast asleep near his

furnace, which was calculated to hold 38½ square feet of coal when properly charged, and which, when he was found, did not contain more fire than was sufficient for an ordinary cottage grate. It was pointed out to the magistrates that neglect of this kind might lead to the most serious consequences, and they imposed a penalty of 10*s.* and costs! Mr. Wood, from the office of Mr. Maskell Pease, prosecuted.

A meeting of the miners' delegates of the Tamworth district was held on Monday to consider the advisability of supporting the men on strike in South Wales, and also the propriety of encouraging the miners of the district to remove to the coal fields of Lancashire and Yorkshire. With regard to the first proposition it was decided to impose a levy of 1*s.* per man to support the men on strike, but after considerable discussion it was resolved not to encourage the removal of miners to this county, it being considered that the labour market in the coal fields was not understocked. Some few men from South Wales have already arrived in this district, and have readily found employment.

There is nothing new to report concerning trade. The Christmas and New Year holidays over, business has become as brisk as before, and there are rumours of a further increase in the price of coal, of which the supply is still unsatisfactory.

The returns of the quantity of coal sent from Lancashire to London during the past year contrast most favourably with the tonnage forwarded in 1871. The London and North-Western Railway Company takes nearly all the coal sent from the Wigan district to the metropolis, and there went over the line from various pits 833,729 tons in 1871 and 1,534,814 tons in 1872, showing an increase of 201,045 tons. Of the quantity sent in 1872 the Wigan Coal and Iron Company furnished 107,146 tons—one-tenth of the whole; Ince Hall, 17,454 tons; Orrell, 37,181 tons; Gidlow and Sumley, 9547 tons; Pemberton, 12,100 tons; Rose Bridge, 4260 tons; Hindley-field, 2649 tons; Holme House, 2175 tons; Bryn Hall, 1451 tons; and Victoria, 1069 tons; making a total of 196,079 tons. The Wigan district numbers about 90 collieries, the production being close upon 7,000,000 tons. In 1871 the London and North-Western Railway Company carried from Lancashire to different parts of the kingdom 5,487,050 tons of coal.

MANGANESE, AND ITS USES.

Manganese, as is generally known, is extensively used for bleaching purposes, and is necessary to the progress of the cotton trade, being the chief essential in the manufacture of chlorine. The quantity annually used for this purpose alone must be enormous, and, in addition to this, manganese and manganese compounds are now extensively used in dyeing. But this is not all, for since the invention of the Bessemer process for the manufacture of steel, the increase in the consumption of manganese has been enormous, it having been found that the free use of spiegel-eisen or its equivalent was absolutely necessary to the success of the invention, and it is manganese that gives to the spiegel-eisen its valuable properties. The ores of manganese are rather numerous, but those which may be regarded as the most remunerative, commercially speaking, are the rich hydrated oxides of Devonshire, and few lodes produce these in larger quantity than the Chilton and Hogston, which for many years have been extensively worked by Messrs. Sims. The experience of a century proves that the lodes are thoroughly reliable, and capable of profitable development.

The BOWDEN HILL MANGANESE MINING COMPANY has just been formed, with a capital of 12,000*l.*, in shares of 1*l.* each, to develop an extensive sett in the vicinity of the celebrated Hogston Mine, which has recently been inspected, and most favourably reported upon by several mining agents of considerable experience in the district. The rich lodes of the Chilton, Hogston, and Langston Mines (which are in private hands) traverse the property. The natural geological position of the mine is such as to permit of the laying open of many fathoms of backs, and the drainage of the whole property, by the driving of an art level from the bottom of the hill, so that expensive machinery will be entirely dispensed with. It is estimated that at the present price of 8*s.* per ton the working of the mines would leave a clear profit of about 6*s.* per ton; and it is believed that, when the property is developed, at least 200 tons per month may be produced. This would give 14,400*l.* per annum, or "more than sufficient to reimburse the shareholders their entire investment annually." The company acquires the property for 8000*l.*, of which seven-eighths is taken in shares, leaving 4000*l.* for working capital; and as Capt. John Goldsworthy, who has undertaken the management of the mine for the company, considers that from 2500*l.* to 3000*l.* will be ample, there is no fear that it will be hampered from want of funds. We understand that the shares have been already largely applied for.

METALLIC MANGANESE.

Although manganese is one of the most abundant metals, possessing great hardness, and from its close resemblance in many respects to iron, we might expect to find it of great use in the arts, its reduction from its ores has been so difficult and expensive that metallic manganese is to-day a curiosity found only in the college collections and metallurgical museums. Mr. Hugo Tamm has recently succeeded in inventing a flux, or rather two fluxes, which seem to solve the problem, and promise to give us cast manganese in large quantities at reasonable prices.

A white flux is first made from pulverised glass (free from lead) 43.9 parts; quick lime, 18.5 parts; fluor spar, 18.5 parts. Of this white flux he takes 34 parts, and mixes it with 5.5 parts lampblack or soot, and 6.5 parts good pyrolysate or black oxide of manganese. When fused in a suitably protected crucible he obtains 17.5 parts of crude manganese and a beautiful olive-green slag, which is pulverised and used for reducing more of the ore, under the name of green flux. A crucible which will withstand a white heat for hours is then lined with a mixture of 3 parts graphite and 1 part fine clay, stirred up with water to a thick dough. This lining protects the crucible from the action of the flux, which at the high temperature would destroy even a graphite crucible. When about to begin the operation of reducing the ore, 91 parts of good soot or lampblack are intimately mixed with 1000 parts of pyrolysate, and 400 parts of the green flux also mentioned is slightly mixed with it, and enough of any sort of oil added to moisten the mass. The charge is next pressed into the crucible and covered with a thick round wooden cover, which is, of course, charred in the fusion, and thus protects the contents. Over this is placed a cover of graphite or clay, an opening only being left for the escape of the gases generated during the fusion.

The crucible and contents are first heated gradually long as gases are given off, then the heat is rapidly increased by a blast up to a white heat, and kept there several hours, the time depending on the size of the charge. When the reduction is completed, the heat is lessened, and the crucible allowed to cool before the contents are removed. The olive-green slag is ground up and used again, mixed with about 1-10th its weight of white flux. The manganese obtained in this way contains about 3 per cent. of impurities, principally iron, aluminium, silicon, and carbon. The contaminations being similar to those in cast iron, Mr. Tamm proposes to call it cast manganese. It may be refined according to Berthier's method, by fusing in a fire-clay crucible with 5th its weight of carbonate of manganese, a wooden cover being used to prevent oxidation.

The value of Mr. Tamm's discovery becomes evident when we compare the simplicity and cheapness of his process with those previously employed. Brunner obtained it by reducing the chloride or fluoride with sodium, after the method of Deville in preparing aluminium. It had also been obtained in small quantities by repeated fusions of the protoxide with charcoal and oil. The happy thought of adding to this some ground glass and fluor-spar renders a single fusion sufficient to reduce a native ore, instead of requiring several fusions and much trouble in preparing a protoxide from the carbonate. Metallic manganese has somewhat the appearance of cast-iron. It is hard enough to scratch steel, and cuts glass like a diamond. It has the effect of rendering steel itself harder and tougher. In the Bessemer process manganese is introduced into the converter in the form of spiegel-eisen. This property of its hardness will, no doubt, render it very valuable in the preparation of alloys. In its pure state we cannot expect to use it extensively, owing to its oxidising so readily that specimens of it require to be kept in closely stoppered bottles, or under naphtha. It decomposes water like sodium, but less rapidly, and does not reduce metallic salts like the last-named metal. It is only fusible in the strongest heat of the blast-furnace, and this refractory property is communicated to its alloys. When heated it shows a play of colours at different temperatures, like steel, and is covered with a brown film of oxide. It is also as heavy as iron, for which it would be mistaken by the careless observer, but the difference would be easily detected on applying a magnet, by which it is but slightly attracted, if at all. The truth is we know very little about the properties of manganese, as it has never been prepared pure in large quantities. Manganese and copper afford an alloy very similar to German silver.—*Scientific American*, Jan. 11.

HONDURAS BONDS.—An important and well-attended meeting of bondholders was held at the London Tavern, Bishopsgate-street, on Jan. 6, and through the energy and courtesy of Capt. Bedford Pim we are enabled to publish the interesting proceedings thereof in the Supplement to this day's Journal. The gallant captain appears in the very exhaustive speech with which he opened the business to have answered the series of questions, which a few weeks since attracted so much attention, with the utmost frankness, and with satisfaction to all present. His position as Special Commissioner of Honduras seems to have led him into difficulties at Paris, where, through some misunderstanding, he had to submit to the annoyance of 40 hours imprisonment. A large amount of important correspondence was read, and the discussion was of a very animated character, although the majority of the meeting was decidedly in Capt. Pim's favour. At the conclusion of the proceedings, which were presided over by the captain with his accustomed energy and ability, he was voted the cordial thanks of all present.

DRESSING ORES.—Messrs. SAM. CHATWOOD, of Bolton, and J. H. COLLIER, mining engineer, of Edmonstone, have patented some improvements in separating or dressing tin and other ores. According to the pre-liminary specification the ore is "unmacerated, dried, sifted, super-heated, and sorted by currents of air."

LONDON GENERAL OMNIBUS COMPANY.—Traffic returns for the week ending Jan. 12, 1873, 11*s.* 4*d.*

A GENTLEMAN, of lengthened experience and influential connections in the City, DESIRES TO MEET with a PARTNER (the limited form of partnership or otherwise) who can command from £10,000, in a BUSINESS of a FINANCIAL CHARACTER in LONDON, of producing large returns. Principals only will be treated with. Communications strictly private.

Apply, by letter, P. W., care of Mr. Vickers, 2, Cowper's-court, Cornhill, London.

THE BOILER CLEANSING COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.
Capital £100,000, in 50,000 shares of £2 each.
First issue £50,000, in 25,000 shares of £2 each. 5*s.* to be paid on application and 1*s.* on allotment.

BANKERS—LONDON AND COUNTY BANK, Lombard-street, E.C.
BROKERS—Messrs. EYTON and EYTON, 2, Moorgate-street, E.C.
SECRETARY—F. LAMBE PRICE, Esq.
OFFICES—233, GRESHAM HOUSE.

MANAGER—WM. SHAW, Esq.

ABRIDGED PROSPECTUS.

This company is formed for acquiring the invention comprised in the patent of the United Kingdom, No. 2327, dated 4th September, 1871, granted to Mr. Baldwin, for the improved manufacture of fluids for the removal and prevention of incrustation of boilers, &c., and for working the same to the best advantage. The amount of mischief that is caused by the deposit of calcareous matter in boilers is not generally known. It greatly retards the "getting up" steam, increases considerably the cost of fuel, and much enhances the danger of explosion.

The saving of expense in cleaning boilers by this process is about half that effected by the old process of chipping—the mode of cleaning now generally adopted—and which but partially succeeds, and is always attended with material injury to the boiler, as well as the loss of time by stoppage of the engine. When these fluids are used the boiler is perfectly cleansed, and kept so, without any injurious effect upon the metals of which it and its fittings may be made, whether brass, copper, or iron.

The vendors have given an undertaking to the directors not to part with any of their shares for a period of twelve months.

Detailed prospectuses, with copies of reports, may be had, and the Memorandum and Articles of Association and contract may be inspected, and further information obtained of the secretary, at the offices of the company.

ISSUE OF 7500 SHARES OF £10 EACH in the

EAST NORFOLK TRAMWAY COMPANY (LIMITED).

Capital £100,000, in 10,000 shares of £10 each.
Payable as follows:—£1 on application, £2 on allotment; further calls not to exceed £2 per share, and to be made at intervals of not less than two months. Should no allotment be made, the deposits will be returned in full.

DIRECTORS.

The Honourable FREDERICK WALPOLE, M.P., for North Norfolk, Chairman.

JOHN LEE BARBER, Esq., of Hellesdon, near Norwich.

JOHN HUMPHREYS, Esq., Director of the London and the Dalrymple Tramway Companies.

THOMAS ADAIR MASEY, Esq., F.G.S., Inner Temple, London, E.C.
Major Gen. VAUGHAN, C.B., Junior United Service Club, London, S.W.

BANKERS, MESSRS. BARCLAY, BEVAN, TRITTON, TWELLS, and Co., Lombard-street, London, E.C.

Messrs. GURNEYS and Co., Norwich.
Messrs. FIELD, WOOD, and HAYNES, 9, Warrford-court, London, E.C.

SOLICITORS, In London—Messrs. DAVIDSON, CARR, BANNISTER, and MORRIS, Basinghall-street, E.C.
In Norwich—ABEL TILLET, Esq., ENGINEER.

LESLIE JEVES, Esq., C.E., 23, Northumberland-street, London, W.C.
SECRETARY—HENRY KENDRICK, Esq.

OFFICES—24, GRESHAM STREET, LONDON, E.C.

ABRIDGED PROSPECTUS.

This company has been formed for the purpose of constructing and working the ways in the county of Norfolk, commencing with one starting in the Thorpe railway station at Norwich, belonging to the Great Eastern Railway Company, and thence by the side of the River Wensum, through St. Augustine's Gate to the junction of the Taverham and Dereham roads, near the village of Cossey, and thence to Taverham and its paper mills, with branches to Hellesdon and Cossey and the mills. The necessary Act of Parliament, authorising the undertaking, has been obtained, and the required deposit lodged with the Accountant General.

The intended line will traverse an important suburb of Norwich, and these rich districts, with several important mills, breweries, &c., into which, under arrangements with the owners, shillings will be laid, and it is anticipated that the traffic alone will yield a dividend to the shareholders.

An agreement with the Great Eastern Railway Company gives this company the important privilege of carrying their line into the railway station without payment of toll, and by the owners and inhabitants of the district to construct the tramway and works, and provide all the necessary rolling stock and equipment, and to keep the same in good repair for a period of six months after completion, he guaranteeing interest on the capital subscribed at the rate of 5 per cent. per annum from the date of allotment to the expiration of such period.

The project has been favourably received and supported by the city and local authorities, and by the owners and inhabitants of the district. The following contracts have been entered into, viz.:—
28th March, 1872, between this company and the Great Eastern Railway Company, 224 April, 1872, between this company, the Mayor, Aldermen, and citizens of the city of Norwich, and the Commissioners under "The Great Yarmouth Port and Haven Act, 1866."

9th July, and 29th August, 1872, between Robert Edward Clarke and this company, 8th and 10th Jan. 1873, between this company and Frederick Furness.

Full prospectuses and forms of application for shares may be obtained of bankers, brokers, and solicitors, and at the offices of the company, where the above mentioned agreements may be seen.

FOR INVESTORS AND FINANCIERS.

THE STOCK EXCHANGE REVIEW

for JANUARY will be PUBLISHED on TUESDAY NEXT, and will contain valuable and exclusive information upon

AMERICAN MINING PROJECTS.

THE LEGACY OF BAD COMPANY.
MR. T. B. SPRAGUE, M.A., AND OURSELVES.

FALSEHOOD AND FOOLERY OF A SELF-APPOINTED INSURANCE CRITIC.

THE REAL MEANING OF OUR ENORMOUS FOREIGN TRADE.

TRIBUTATIONS OF THE HONOURABLE BONDHOLDERS.

A SERIOUS VIEW OF OUR INDUSTRIAL FUTURE.

THE NATION PROSPERS AND PROSPERS THE CURRENCY.

HINDERS AND HALTS.

ARE THERE ANY RICH LIFE OFFICES?—THE QUESTION ANSWERED.

Special and exclusive items of information interesting to investors, capitalists, and men of business.

To be had (Price Threepence) of the publisher, J. F. BAKER, 33, Old Jewry, E.C.; EVEROTT'S, Royal Exchange; and at the book-stalls of the Metropolitan Railway stations.

MESSRS. LISCOMBE AND CO.,

39, SOUTH CASTLE STREET, LIVERPOOL.
Beg to inform their CLIENTS and the PUBLIC that they are PREPARED to do BUSINESS in ALL CLASSES of MINING SHARES—English, Foreign, and Colonial—at the closest market prices.

MESSRS. THOMAS BORLAZE AND CO.,

MINERAL, ENGINEERING, FINANCIAL, AND GENERAL AGENTS.

Respectfully announce their readiness to INSPECT, VALUE, REPORT, and ADVISE, confidently, INVESTORS on any matter in the above capacities.

Unquestionable references and securities offered where required.

OFFICES.—ST. AUUSTELL, CORNWALL.

MR. CHARLES F. COLLOM,

MINING ENGINEER, INSPECTOR OF MINES, &c.
TAVISTOCK.

MANAGEMENT OF THE SOUTH DEVON FIRE CLAY COMPANY.
Patentees of COLLOM'S PATENT REVOLVING FRAME for DRESSING TIN, AMALGAMATING GOLD, &c.
INVESTMENTS IN MINES ARRANGED FOR CAPITALISTS.

MESSRS. CAMERON AND CO., FINANCIAL AGENTS AND SHARE BROKERS, BRIDGE STREET CHAMBERS, CHESTER.

MR. W. R. TREMELLE, MINERAL BROKER, SWANSEA.

Highest cash prices obtained for all kinds of mineral.

CAPTAIN ABSALOM FRANCIS, GOGINAN, ABERYSTWITTH, MINING AGENT, ENGINEER, AND SURVEYOR.

The great success which is attending the opening and working of the mines in the counties of Cardigan and Montgomery, and the many properties placed at the disposal of Capt. ABSALOM FRANCIS, induce him to offer his services either as ADVISER, INSPECTOR, REPORT, or SURVEY, for Mining Companies or private shareholders.

For terms, apply to Capt. ABSALOM FRANCIS, as above.

MINES ASSESSMENT.

MEETING OF THE COUNTY COMMITTEE will be HELD at the Royal Hotel, Truro, on TUESDAY, the 21st inst., at Two P.M. sharp, to consider the present position of this business. The existing committee has full power to add to its number, the Chairman of the Board of Guardians and Agriculturalists, and other gentlemen interested in the question, will attend whether at present formally Members of the Committee or not. THOS. CORNISH, Secretary. Penzance, 8th January, 1873.

LOVELL CONSOLS TIN MINE FOR SALE.

THE LIQUIDATORS offer the LOVELL CONSOLS TIN MINE FOR SALE—i.e., the LEASE, ENGINE, AND PLANT. Orders to view may be had of Mr. ALFRED LAWRENCE, 2, Bucklersbury, E.C. Tenders received up to the 31st of January.

FRANCO CONSOLS TIN AND COPPER MINING COMPANY (LIMITED).

Notice is hereby given, that the OFFICES of the above company have been REMOVED from No. 25, Gracechurch-street, E.C., to the CORNHILL CHAMBERS, No. 62, CORNHILL, E.C. 16th January, 1873. H. YEATES, Secretary.

THE ROSSENDALE UNION GAS COMPANY.

The above Company are open to RECEIVE TENDERS for the SALE of FIVE HUNDRED TO ONE THOUSAND TONS OF COKE. The company have a siding of the Lancashire and Yorkshire Railway, close to their own works. Tenders to be addressed to— W. BLACKLEDGE, Manager, Chief Offices, Bacup.

ALABAMA AND CHATTANOOGA BONDS.

A GENERAL MEETING OF HOLDERS OF ALABAMA AND CHATTANOOGA RAILROAD BONDS is hereby convened by the Council of Foreign Bondholders, to be HELD at the London Tavern, Bishopsgate-street, on WEDNESDAY, the 24th of January, 1873, at Two o'clock, for the purpose of appointing a committee, and taking the necessary measures.

VICTORIA (LONDON) MINING COMPANY (LIMITED).

Notice is hereby given, that the ORDINARY GENERAL MEETING of the Shareholders of this company will be HELD at the Cannon-street Terminus Hotel, Cannon-street, in the City of London, on THURSDAY, the 23rd day of January, 1873, at half past One o'clock in the afternoon precisely, for the following purposes:—

To receive and consider a report of the proceedings of the company, and a statement of the accounts since the last Ordinary General Meeting.
To elect directors in the place of A. T. Thomson, Esq., and A. Cobbett, Esq., who retire by rotation, and offer themselves for re-election.
To elect auditors for the ensuing year.

By order, J. W. PURCHASE, Secretary. Offices, 20, Moorgate-street, E.C., 7th January, 1873.

N.B.—The Transfer-books of the company will close on Tuesday, the 21st January, 1873, and will be re-open on Thursday, the 6th February, 1873.

THE PORT PHILLIP AND COLONIAL GOLD MINING COMPANY (LIMITED).

Incorporated by Royal Charter and under the Companies Acts of 1862 and 1867. Notice is hereby given, that the ORDINARY GENERAL MEETING of the Shareholders of this company will be HELD at the Cannon-street Terminus Hotel, Cannon-street, in the City of London, on THURSDAY, the 23rd day of January, 1873, at One o'clock precisely, in pursuance of the Deed of Settlement, to receive the directors' reports and the accounts, declare a dividend, re-elect retiring officers, and to transact such other business as may be necessary.

By order, J. W. PURCHASE, Secretary. Offices, 20, Moorgate-street, London, E.C., 7th January, 1873.

N.B.—The Transfer-books of the company will close on Tuesday, the 21st January, and will be re-open on Thursday, the 6th of February next.

NEWFOUNDLAND MINING COMPANY (LIMITED).

ISSUE OF SCRIP CERTIFICATES. Notice is hereby given, that SCRIP CERTIFICATES will be ISSUED to the SHAREHOLDERS on the 10th inst. at the registered offices as below, of the bank receipts for deposit, allotment, and first call.

By order, N. M. BYERS, Secretary. 32, New Broad-street, London, E.C., 14th January, 1873.

THE BELSTONE MINING COMPANY (LIMITED).

Notice is hereby given, that the ORDINARY HALF YEARLY GENERAL MEETING of the Shareholders will be HELD at the offices of the company, No. 2, Royal Exchange-buildings, in the City of London, on WEDNESDAY, the 20th day of January instant, at One o'clock precisely, to receive and consider the report of the directors, and the audited accounts and balance sheet of the company for the past year.

By order of the Board, FRAS. R. REEVES, Secretary. 2, Royal Exchange Buildings, London, 18th January, 1873.

THE LAST CHANCE SILVER MINING COMPANY OF UTAH (LIMITED).

The Board have THIS DAY DECLARED A DIVIDEND OF TWO SHILLINGS PER SHARE, which will be PAID on the 1st February proximo.

T. F. THOMAS, Secretary. 4 and 6, Great Winchester-street, London, E.C., 14th Jan. 1873.

THE LAST CHANCE SILVER MINING COMPANY OF UTAH (LIMITED).

Notice is hereby given, that the TRANSFER BOOKS of this company will be CLOSED on SATURDAY, the 18th inst., and RE-OPENED on TUESDAY, the 21st February.

By order of the Board, H. P. THOMAS, Secretary. 4 and 6, Great Winchester-street, London, January 17, 1873.

THE SILVER MINES OF NEVADA, UTAH, AND COLORADO, AND THE LABOUR QUESTION AT THE MINES.—See the "Mormons and the Silver Mines."

By JAMES BONWICK, F.R.G.S., author of "The Last of the Tasmanians," &c. Just published, price 5s. 6d.

Nearly half the volume is filled with accounts, geological and commercial, of the silver mines recently discovered in the Mormon State. Mr. Bonwick proceeds to write with a full knowledge of his subject, and without any tendency to exaggeration or distortion of facts. On many accounts the book is well worth reading. —Literary World.

London: Holder and Stoughton, 27, Paternoster-row.

GRIFFITHS'S GUIDE TO THE IRON TRADE.

GRIFFITHS'S GUIDE TO THE IRON TRADE OF GREAT BRITAIN, with the Author's ANNUAL REVIEW OF THE TRADE for 1872, will be published ready for the post at the end of February, and sent post free to all parts of the United Kingdom, price 5s.

Remittances to be sent early, addressed GRIFFITHS and Co., 133, Cannon-street, London.

This little brochure will contain a correct list of all the Ironworks in England, Scotland, and Ireland; a chapter on the Position of the Trade in Staffordshire, North and South, with full particulars of all the leading makers. A description of all the works, the names of the proprietors, and the different firms, with their various brands of iron. The same information will be given with regard to the Shropshire, Northamptonshire, Middlesex, Lancashire, and West Cumberland districts, accurately describing the different kinds of iron made by the several firms. The book will likewise contain an account of the great foundries in England and Scotland, with the Manufacturers of Steam-Engines, Chilled and Soft Rails, and other machinery necessary in ironworks; likewise an account of all the Bessemer and other processes in vogue in the United Kingdom.

Mr. Griffiths's object will be to give all information which he considers would be valuable to Ironmasters, Merchants, Mineral Lords, Coalowners, and others interested in the development of the great industry of the Iron Trade.

THE IRON AND COAL TRADES' REVIEW: ROYAL EXCHANGE, MIDDLEBOROUGH.

The IRON AND COAL TRADES' REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coalowners, &c., in all the iron and coal districts. It is, therefore, one of the leading organs for advertising every description of Iron Manufactures, Machinery, New Inventions, and all matters relating to the Iron, Coal, Hardware, Engineering, and Metal Trades in general.

Offices of the Review: Middleborough-on-Tees (Royal Exchange); London, 11 and 12, Red Lion-court, Fleet street; Newcastle-on-Tyne (50, Grey-street).

IMPORTANT TO ALL IN TRADE.

STUBBS'S MERCANTILE OFFICES TRADE AUXILIARY COMPANY (LIMITED).

With Offices at Dublin, Glasgow, Paris, Birmingham, Liverpool, Bristol, Manchester, Southampton, Norwich, Newcastle, Belfast, Cork, Edinburgh.

STUBBS'S WEEKLY GAZETTE (indispensable to all traders giving credit), contains a List of all Bankruptcies, Liquidations, Arrangements, Trusteeships, Bills of Sale, and all Preferential Securities, County Court Judgments, &c.

DEBT RECOVERY.—Debts recovered upon a simple and comprehensive system. Full particulars in prospectus.

Terms, One Guinea and upwards, according to requirements.

Prospectuses forwarded on application to the SECRETARY, Stubbs's Mercantile Offices, 12, Gresham-street, London, E.C.

CAUTION.—No office connected with this establishment in the City of London, except at 12, Gresham-street.

CAPT. ROBERT KNAPP, MINING ENGINEER AND SURVEYOR.

Having recently returned from Nevada, where he has added seven years' experience in Silver Mining to his former extensive and varied experience in this country, is prepared to RECOMMEND TO INTENDING INVESTORS several VERY VALUABLE MINING PROPERTIES, selected from close personal inspection, and at unusually low rates. And also to INSPECT AND REPORT on other MINES in NEVADA, or other States on the Pacific Coast.

Address, Liskeard, Cornwall.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN THE MATTER OF THE COMPANIES ACT, 1862, and of the SOUTH CLIFFORD UNITED MINING COMPANY.—By the direction of His Honor, the Vice-Warden, notice is hereby given, that on WEDNESDAY, the 20th day of January inst., at Eleven o'clock in the forenoon, at the Registrar's Office, at Truro, in the County of Cornwall, this Court will PROCEED TO MAKE A CALL OF SIX POUNDS PER SHARE on all the Contributors of the said company settled on the List of Contributors of the said company as present members thereof.

All persons interested therein are entitled to attend at the time and place to offer objections to such call. FREDERICK MARSHALL, Registrar. Dated 16th January, 1873.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN THE MATTER OF THE COMPANIES ACT, 1862, and of the EAST PROVIDENCE MINING COMPANY.—Notice is hereby given, that all CREDITORS of the ABOVE-NAMED COMPANY are REQUIRED on or before Wednesday, the 20th day of January inst., to SEND IN THEIR NAMES AND ADDRESSES, and the AMOUNTS AND PARTICULARS of THEIR SEVERAL CLAIMS, to FREDERICK MARSHALL, Esq., the Registrar of the said Court at Truro.

Dated January 15, 1873. FREDERICK MARSHALL, Registrar.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN THE MATTER OF THE COMPANIES ACTS, 1862 and 1867, and of the OKEF TOR MINE COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 10th day of January instant, presented to the Vice-Warden of the Stannaries by Robert Marsden Massey, of No. 41, Palace-garden-terrace, Kensington, in the County of Middlesex, gentleman, a contributor and creditor of the said company, and that the said petition is directed to be heard before the Vice-Warden, at No. 24, Duke-street, in the City of Westminster, on Tuesday, the 28th day of January inst., at Twelve o'clock at noon; and by an order made in the said matter by His Honor the Vice-Warden, dated the 13th day of January inst., Charles Lee Nichols, of No. 1, Gresham-buildings, Bishopsgate-street, in the City of London, public accountant, was appointed provisionally official liquidator of the said company until the hearing of the said petition or the further order of the said Court.

Any contributory or creditor of the company may appear at the hearing of the said petition, and oppose the same, provided he has given at least two clear days' notice to the petitioner, or his solicitor, or agent, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., Secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioner, or his solicitor, or agent, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 24th day of January instant, and notice thereof must at the same time be given to the petitioner, his solicitor, or agent.

ROBERT MACLEANE PAUL, Truro, Cornwall (Agent for Davidsons, Carr, Bannister, and Morris, 70, Basinghall-street, London, Solicitor to the Petitioners).

Dated Truro, 14th January, 1873.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN THE MATTER OF THE COMPANIES ACTS, 1862 and 1867, and of the WHEEL HENRY TIN AND COPPER MINING COMPANY (LIMITED).—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 14th day of January instant, presented to the Vice-Warden of the Stannaries by Henry William Mathias, of 21, Moorgate-street, in the City of London, gentleman, a contributory and creditor of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the Law Institution, Chancery-lane, London, on Wednesday, the 25th day of January instant, at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing of the said petition and oppose the same, provided he has given at least two clear days' notice to the petitioner, or his solicitor, or agent, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., Secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioner, or his solicitor, or agent, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 25th day of January instant, and notice thereof must at the same time be given to the petitioner, his solicitor, or agent.

ROBERT MACLEANE PAUL, (Agent for George Bagden, 22, Great Winchester-street, London, Solicitor to the Petitioner).

Dated Truro, 16th January, 1873.

MINING MATERIALS AND LEASES FOR SALE.

TO BE SOLD, BY PUBLIC AUCTION, at the Bedford Hotel, Tavistock, on Tuesday, the 28th day of January, 1873, at Three o'clock in the afternoon, by GREGORY DOBSON, Auctioneer (by order of the Liquidators of the Virtuous Lady Mining Company, Limited), in Two Lots, the LEASES, PLANT, MACHINERY, and MATERIALS of the

VIRTUOUS LADY AND POLDICE SETTS, in the parish of BUCKLAND MONACHORUM, DEVON.

LOT 1.—THE PLANT and MATERIALS at POLDICE, comprising—18 ft. WATER-WHEEL, 8 ft. breast; 6 head stamps axle, with iron lifters, complete; bobs, 12 fms. 6 in. pumps, wire rope, drawing machine, tram wagons, quantity of tram, smiths' and miners' tools, lead and stand, dressing floors, and the usual appliances of a mine in full work. With this lot will be sold the sett granted by Sir Massey Lopes, Bart., for a term of 21 years, from the 24th June, 1870, at the yearly rent of £50, to be allowed in the dues of 1st dist.

LOT 2.—THE PLANT and MATERIALS at VIRTUOUS LADY, comprising—30 ft. WATER-WHEEL, 3 ft. breast, and 18 ft. WATER-WHEEL, 4 ft. breast, both with iron rings; Cornish CRUSHER; large quantity of chain, 20 fms. 7 and 8 in. lifts complete, rods and strapping plates, pulleys and stands, capstan bobs, &c., smiths' and miners' tools, dressing tools, bell and stand, &c. The whole of the plant and materials of this lot are drawn to surface. With this lot will be sold the sett granted by Sir Massey Lopes, Bart., for a term of 21 years, from the 24th June, 1870, at the yearly rent of £50, to be allowed in the dues of 1st dist.

The machinery of both lots is in excellent condition, having been erected near within the last two years. The mines are situated within an easy distance from the Tavistock and Hordridge railway stations.

Further particulars and every information may be obtained on application to the Auctioneer, at Tavistock, or either of the liquidators, as follows:—W. JONES, Esq., Morfe Lodge; Mr. T. W. GREENFIELD (who will show the leases); or Mr. T. HOSKING, East Russell, Tavistock.

Dated Tavistock, 5th January, 1873.

GOING COPPER AND TIN MINE FOR SALE.

MR. JOHN THOMAS has been instructed TO SELL, BY AUCTION, on Friday, the 21st day of February, 1873, at Two o'clock, as a going concern, the

CREGBRAWSE AND PENKIVEL UNITED MINES, in the parish of KEA, CORNWALL, with STEAM and general MATERIALS.

Full particulars will be published next week. In the meantime application may be made to Mr. JOHN THOMAS, Auctioneer, Redruth.

TO COAL MASTERS AND OTHERS INTERESTED IN MINING.

THE UNWORKED PORTIONS OF THE LOWER MINES in the ESTATE belonging to Sir G. H. BEAUMONT, Bart., at COLEORTON, in the County of LEICESTER, containing SEVERAL HUNDRED ACRES, are now OFFERED TO CAPITALISTS, and may be made the subject matter of treaty by lease.

The mines are now worked extensively in the neighbourhood, and command a ready market for steam and household purposes. The estate communicates with the Midland Railway by the line of the Coleorton Railway, and the line of the Derby and Ashby-de-la-Zouch Railway, and so is most favourably situated for the development of the coal field.

Application for permission to view may be made to Mr. E. FISHER, Solicitor, Ashby-de-la-Zouch; or to Mr. J. T. WOODHOUSE, Civil and Mining Engineer, Derby.

SHARE IN COLLIERY FOR SALE.

TO BE SOLD, ONE-FOURTH SHARE in a VALUABLE LEASEHOLD COLLIERY, situated at ASHTON-UNDER-LYNE, in the County of LANCASTER, and known as the LORDSFIELD COLLIERY, held for a term of years expiring on the 1st June, 1881.

For further particulars and information, apply to Messrs. BELFRAGE and MIDDELOX, Solicitors, 36, Bedford-row, London; or to Mr. JOHN BUCKLEY KYNDER, of Dukinfield, in the County of Chester, Auctioneer.

RARE OPPORTUNITY FOR MAKING A FORTUNE.

TO BE SOLD, PART OR ENTIRE (former preferred) of a COLLIERY ROYALTY in NORTH WALES, bordering on the London and North-Western Railway, and close to a shipping port. There are several shafts partially sunk, some requiring to be sunk still deeper, but operations stopped for want of capital. There are four seams of good house and steam coal proved in an area upwards of 400 acres of surface. Holder will sell the entire, including the present plant (not sufficiently powerful for sinking further) for £1000, but would prefer taking a PARTNER, who would advance the necessary capital for half profits, which in the present state of the coal trade are almost fabulous.

Address, "Vulcan," care of Mr. Watson, 15, Fenwick-street, Liverpool.

SPLENDID OPPORTUNITY FOR SMALL CAPITALISTS.

FOR SALE, A FREEHOLD BEST FIRE-CLAY AND TERRACOTTA WORKS, complete, with nearly new plant for grinding and working the clay, steam engine, drying sheds, kilns, &c.; capable of producing 22,000 bricks weekly. It is situated in the midst of other flourishing like works, with coal at low figures, and has rail and water accommodation on the site itself. The clay produces the most superior facing bricks, ornamental terra-cotta works, &c. With £500 an energetic man can here make a genuine fortune.

Apply to Mr. WATSON, 15, Fenwick-street, Liverpool.

TO IRONMASTERS, &c.

TO BE DISPOSED OF, the LEASE for 42 years, of a VALUABLE IRONSTONE ROYALTY, in the heart of the CLEVELAND DISTRICT, with shafts sunk, and the stone opened up, and ready for immediate realisation—being within 20 yards of the main line of rails to Middlesbrough; its position and instant profitable working is unquestionable.

Apply to Mr. WATSON, 15, Fenwick-street, Liverpool.

TO PROMOTERS OF PUBLIC COMPANIES.

TO BE DISPOSED OF, the LEASE of a valuable IRONSTONE ROYALTY in NORTHAMPTONSHIRE, adjoining the railway. The estate contains iron ore of rich quality; valuable beds of clay, suitable for the manufacture of terra cotta ware, drain pipes, and best bricks. The mines are in full working order.

For particulars, apply to Mr. JAMES SAUNDERS, Metal Broker, 64, Darlington-street, Wolverhampton.

COUNTY OF DONEGAL, IRELAND.

TO BE SOLD, EIGHT TOWNLANDS, containing above NINE THOUSAND ACRES. MUCKISH GLASS SAND. SLATES AND IRON ORE are found on this property.

Please apply to the Rev. A. S. Nixon, Clones.

TO BE SOLD, BY PRIVATE TREATY, a 33 in. CORNISH PUMPING ENGINE, 7 ft. stroke equal beam, in good order, and little the worse for wear. Also, TWO 11 tons and ONE 9 tons CORNISH BOILERS, with 7 ft. diameter shells, tubes 3 ft. diameter. Open to a reasonable offer for the lot into trucks, or separately, as may be agreed on.

Applications to be made to "E. B." Engineer, Mr. Sandford's, Stationer, High-street, Shrewsbury.

STEAM ENGINE.

TO BE SOLD, cheap, a GOOD 36 in. PUMPING ENGINE, 8 ft. stroke in shaft, 9 ft. in cylinder, with or without a 10 ton BOILER. Also iron Rings for a 40-ft. WATER WHEEL and PITWORK of various sizes.

Apply to GEORGE PROUT, Lumbum Foundry, Tavistock.

ASTERLEY COLLIERY, NEAR MINSTERLEY, SALOP.

TO BE LET ON LEASE, with immediate possession, the UNEXHAUSTED COAL under about ONE HUNDRED AND EIGHTY ACRES of LAND, situate at ASTERLEY.

The colliery is now in work, and is supplied with water and winding engines, machinery, and working plant, the whole of which can be taken to by the lessee at a valuation.

The lessee of the above colliery will have an opportunity of taking a separate lease of the unexhausted coal under the adjoining lands, comprising about 75 acres, and forming what was formerly known as "The Marsh Hills Colliery."

Applications to view may be made to Mr. RICHARD BUTLER, at the Asterley Colliery Office, and further particulars may be obtained on application to Mr. SPROTT, Solicitor, Shrewsbury.

COAL.

TO BE LET, OR SOLD, the LEASE of TWO HUNDRED AND EIGHTEEN ACRES of COAL (three seams) in MONTGOMERYSHIRE, about three-quarters of a mile distant from a station on the Great Western Railway.

For particulars, apply to the Proprietor, 28, Chester-square, London, S.W.

LEAD MINES IN THE COUNTIES OF DURHAM AND NORTHUMBERLAND.

TO BE LET, ON LEASE, with immediate possession, the HUNSTANWORTH AND NEWBIGIN ROYALTIES the former about 3834 acres and the latter 200 acres, or thereabouts.

The Hunstanworth Royalty adjoins the celebrated W.B. Lead Mines, and has for many years yielded large quantities of lead ore, and much of the ground is undeveloped.

For particulars, apply to JOSEPH DODDS, Esq., M.P., No. 4, Spring-gardens, Charing-cross, London, S.W., or Mr. THOMAS J. BEWICK, C.E., No. 2, Westminster-chambers, Victoria-street, London, S.W., and Haydon Bridge, Northumberland.

FOR SALE.

A DOUBLE-ACTING ROTARY ENGINE, 36 in. cylinder, 9 ft. stroke.

With 12 ton FLY WHEEL. All as good as new. Also, a 10 ton CORNISH BOILER, with necessary fittings.

Can be viewed, and particulars obtained, on application to Capt. JOHN PAUL, Llanidloes, Montgomeryshire.

HORIZONTAL ENGINES, of most approved construction, from 8 to 60 in. cylinder, for WINDING AND GENERAL PURPOSES.

Some good secondhand HORIZONTAL ENGINES ON SALE, single and in pairs, from 14 inches to 29 inches cylinders, suitable for winding, &c. GOOD BOILERS of all sizes.

CREASE AND CO., 39, CONGREVE STREET, BIRMINGHAM.

FOR SALE, a high-class 18-horse power double-cylinder PORTABLE STEAM ENGINE, with link motion, reversing gear, suitable for pumping, winding ore, crushing, &c.

Also, a 16-horse power single cylinder PORTABLE STEAM ENGINE, with or without reversing gear. The above are ready for immediate delivery.

PORTABLE ENGINES, 3 to 35-horse power; WINDING AND PUMPING GEAR; MORTAR MILLS; SAW TABLES; VERTICAL ENGINES, &c., supplied promptly.

SEVERAL GOOD SECONDHAND PORTABLES FOR SALE. BARROWS AND STEWART, ENGINEERS, BANBURY.

RAILWAY CARRIAGE COMPANY (LIMITED). ESTABLISHED 1847.

OLDBURY WORKS, NEAR BIRMINGHAM. MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, and EVERY DESCRIPTION OF IRONWORK.

Passenger carriages and wagons built, either for cash or for payment, over a period of years.

RAILWAY WAGONS FOR HIRE. CHIEF OFFICES, OLDBURY WORKS, NEAR BIRMINGHAM.

LONDON OFFICES, 7, GREAT WINCHESTER STREET BUILDINGS.

THE BIRMINGHAM WAGON COMPANY (LIMITED). MANUFACTURE RAILWAY WAGONS OF EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.

EDMUND FOWLER, Sec. WAGON WORKS, SMETHWICK, BIRMINGHAM.

Loans received on Debenture; particulars on application.

BENNETTS' SAFETY FUSE WORKS, ROSKEAR, CAMBORNE, CORNWALL.

BLASTING FUSE FOR MINING AND ENGINEERING PURPOSES.

Suitable for wet or dry ground, and effective in Tropical or Polar Climates.

W. BENNETTS, having had many years' experience as chief engineer with Messrs. Bickford, Smith, and Co., is now enabled to offer Fuse of every variety of his own manufacture, of best quality, and at moderate prices.

Price Lists and Sample Cards may be had on application at the above address.

LONDON OFFICE, H. HUGHES, Esq., 85, GRACECHURCH STREET.

Geological Mineralogy—King's College, London.

PROFESSOR TENNANT, F.R.S., will resume his LECTURES on MINERALOGY applied to GEOLOGY and the ARTS, on WEDNESDAY next, at 9 A.M., and on THURSDAY, at 8 P.M.

He gives PRIVATE INSTRUCTION at his residence, 149, Strand, W.C.

GEOLOGY.—ELEMENT

FOR 1873.

POST FREE, TWO SHILLINGS, IN STAMPS,

BAILEY'S

ILLUSTRATED INVENTIONS,

(Sixteenth edition), 25th thousand, 1000 engravings, 150 pages, weight 10 ounces, illuminated covers. Published at a great cost by

J. BAILEY AND CO.,
INVENTORS, PATENTEES,
BRASSFOUNDERS,

AND MANUFACTURERS OF

Engineers' & Contractors' Sundries,
 AND USEFUL INVENTIONS

For Cotton Spinners, Railway Companies, Engineers, Colliery Proprietors, and nearly every description of Employers of Labour, County Gentlemen, &c., &c.;

ALSO OF EVERY DESCRIPTION OF

ENGINE AND BOILER FITTINGS,

PYROMETER INVENTORS AND PATENTEES;

ELECTRIC TELEGRAPH ENGINEERS

AND

TURRET CLOCK MAKERS;

Makers of the celebrated

AUTOMATIC CLOCKS,

For indicating the pressure of steam day and night, rise and fall of the tide, &c.

Winding Indicators, Signal Bells,
 &c., &c.

DEPARTMENTS:

I.—BRASS FOUNDRY & STEAM FITTING DEPARTMENT;

II.—ENGINEERS' SUNDRIES DEPARTMENT.

III.—SMALL MACHINE, PUMP, AND FIRE ENGINE, &c., &c., DEPARTMENT.

IV.—CLOCK DEPARTMENT.

V.—ELECTRIC TELEGRAPH DEPARTMENT.

All profusely illustrated, described, and priced.

J. BAILEY AND CO.,
ALBION WORKS,
SALFORD,
MANCHESTER.

The above is sent free to Working Men's Clubs, Mechanics' Institutions, or Improvement Societies.

BAILEY'S SPECIALITIES FOR 1873.**BOILER FEEDING.**

THE GRINDROD
BOILER FEEDER,

Which keeps the water at one definite height day and night.
 MUCH IN USE IN THIS DISTRICT.

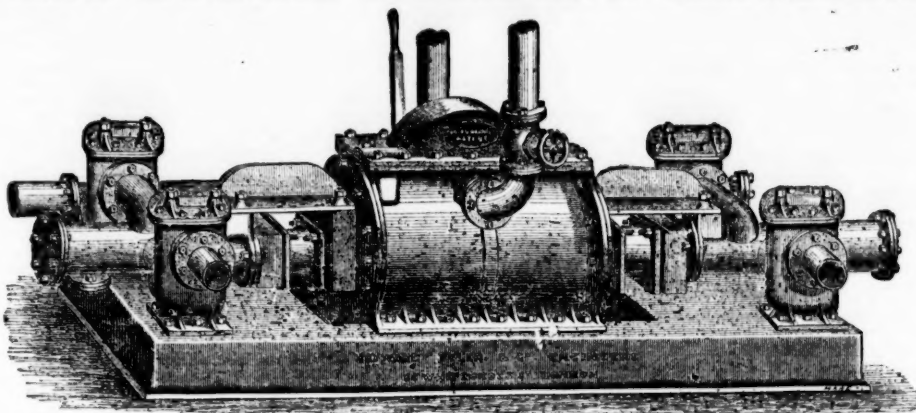
THE
STILWELL WATER HEATER
AND
LIME EXTRACTOR.

THE HALLAM
GIFFARD INJECTOR.

These are all high-class inventions, and are with confidence recommended.

CIRCULARS ON APPLICATION.

HAYWARD TYLER AND CO.'S PATENT STEAM PUMPING MACHINERY.



"About a year and a-half since a direct-acting pumping-engine was erected at the Trimdon Grange Colliery by Messrs. Hayward Tyler and Co., of London. The diameter of the steam-cylinder of this engine is 40 in., that of the rams 16 in., the pump-plungers having a 4 ft. stroke. The whole of the combined apparatus is carried on a solid bed-plate, and the pumps are so arranged that they can be drawn off endways, if required, a planed groove being formed in the bed-plate to keep them true. A pumping-engine of this description requires no very accurate adjustment of level, as it is self-contained, and all the strains are direct from the steam-cylinder to the pumps, which at their underside are attached to the bed plate, and are supported by a strong stay above. The engine at the Trimdon Colliery is placed in a headway cut for its reception, at a depth of 400 ft. from the surface, and a short distance from the main shaft. The pump takes its water from a sump, into which the level drains. The pumping-engine continues to do its work in a satisfactory manner, and at a recent trial made by Mr. R. Foster, engineer, it was found that the pump was throwing to bank, a distance of 400 ft., above itself, 245½ gallons of water per minute, the pump running at 10 strokes, thus doing 89.5 per cent. of its theoretical duty."—See *Engineering*, 3rd Jan., 1873.

Full particulars, references, testimonials, &c., post free, on application to—

HAYWARD TYLER AND CO.,
 84 AND 85, UPPER WHITECROSS STREET, LONDON, E.C.

BOLTS AND NUTS. BOLTS AND NUTS.

MADE BY PATENT MACHINERY.

Suitable for Engineers, Millwrights, Coach and Wagon Builders, Colliery, and other Purposes.

AN EXTENSIVE ASSORTMENT OF OVER 200 TONS ALWAYS IN STOCK.

From which orders can be promptly executed. Every description of Bolts and Nuts made to order.

BAR IRON. BAR IRON.

OVER 1000 TONS OF BARS, PLATES, SHEETS, ANGLES, HOOPS, SQUARES, ROUNDS, AND FLATS.

All of First-class Quality.

RAILWAY, COLLIERY, AND TRAM RAILS, TO ANY SECTION.

A large Stock of Anvils, Vices, Ties, Irons, Smiths' Bellows, Files, Rasps, Picks, Spades and Shovels, Sledge and Hammer, Best Swedish Horse Nails, Back Bands, Plough Traces, Best Spring, Cast, Double Shear, and Blister Steel.

STANSFELD & SONS, Iron Merchants, Bolt and Nut Manufacturers,
 ALFRED STREET, BOAR LANE, LEEDS.

H. T. OWENS,
 51, SAND PITS, PARADE,
BIRMINGHAM.

MANUFACTURER OF
 ALL DESCRIPTIONS
 OF

MINERS' PATENT SAFETY LAMPS

AND

SOLE MANUFACTURER OF

MINERS' RAMMERS, DRILLS, and
COPPER SPINDLES,
 FOR BLASTING PURPOSES.

As required by the recent Act of Parliament.

McNIEL, MULLER, AND CO.,

39, MARKET STREET,

MANCHESTER,

SOLE AGENTS FOR "S. B. HEMATITE,"
 "S. B. YORKSHIRE," PIG IRON
 "CLAY LANE,"
 "CLAY CROSS,"

AGENTS FOR JACKSON, GILL, AND CO., IMPERIAL
 IRONWORKS, NEAR MIDDLESBOROUGH;
 DARLINGTON WAGON COMPANY, DARLINGTON.

SCOTCH, HEMATITE, STAFFORDSHIRE, DERBYSHIRE, FOREST OF
 DEAN, COLD BLAST AND REFINED PIG IRON, PUDDLED BARS AND
 BAR IRON, STEEL, SELLER, TIN, COPPER, LEAD, SHEETS, ORS,
 BOLTS, NUTS, SPIKES, MANUFACTURED IRON, &c., &c.

SOMERVELL BROTHERS,
NETHERFIELD, KENDAL,

MANUFACTURERS OF

LEATHER BANDS, HOSE PIPES, FIRE BUCKETS,**HAND LEATHERS, BLUE BENDS, AND****THE KENDAL ENGINE BENDS,**

And every description of LEATHER for ENGINEERING and
 COLLIERY PURPOSES.



THE

RAILWAY SPRING COMPANY,
MILLSANDS, SHEFFIELD.

Having purchased from the Trustee of the late Firm of W. Charles
 and Co. the extensive works, with the valuable and improved ma-
 chinery, are prepared to execute orders for every description of
RAILWAY SPRINGS.

JOHN BOURNE AND CO.

ENGINEERS, SHIPBUILDERS, AND CONTRACTORS.

BLOWING ENGINES, WINDING ENGINES,

Bourne's Patent Spherical Governors, Bourne's Patent Feedwater Heaters,

Bourne's Patent Gas Furnaces, Bourne's Patent Coal-dust Furnaces,

PUMPING ENGINES, STEAM BOILERS,

66, MARK LANE, LONDON.

[PROTECTED BY ROYAL LETTERS PATENT.]

BARKER'S IMPROVED FUEL

(FROM COAL DUST).

SUITABLE FOR ALL PURPOSES FOR WHICH COAL IS USED.

This fuel, made from dust coal, gives in use results superior to the best coal; it is thoroughly water proof, stacks without liability to spontaneous combustion, loss or deterioration on board ship, or in any climate, and in 30 per cent. less space than coal.

An immense saving in effected by its use on sea-going steamers, owing to its high evaporative power, requiring one-third less stowage room, and avoiding all risk of spontaneous combustion. It burns with little smoke, forming itself into coke; it is very durable, the combustion is perfect, and it will not fall or disintegrate at great heat before a blast or strong draught, nor does it produce clinker.

It will bear rough usage and handling without breakage.

As regards the manufacture, it is easily and cheaply made; the machinery made simple, effective, and comparatively inexpensive.

No heavy pressure is required, or exposure to heat after moulding, to dry or cure (as is usual); and after mixing, the blocks could, if desired, be made up by hand labour; but for large production, self-acting machinery is recommended; and when moulded, the fuel is at once ready for use or transit.

Works are in operation in London, and can be viewed on application.

Intending licensees can send their coal and have it made up into fuel in their own presence, and have it returned to them for trial.

Samples on a large scale suitable for every purpose supplied for trial.

The proprietors of the patents are prepared to grant licenses, and would, if desired, undertake contracts to provide machinery, erect works, and put the same into satisfactory operation, on any required scale of manufacture.

Application to be addressed to the patentees—

Mr. DAVID BARKER, Oldbury House, Northfleet, London; or

Mr. THOS. D. CLARE, 13, St. Mary's Row, Birmingham.

For Excellence
 and Practical Success
 of Engines



Represented by
 Model exhibited by
 this Firm.

HARVEY AND CO.,
ENGINEERS AND GENERAL MERCHANTS,
HAYLE, CORNWALL,
 HAYLE FOUNDRY WHARF, NINE ELMS, LONDON,
 AND 115, GRESHAM HOUSE, E.C.

MANUFACTURERS OF
 PUMPING and other LAND ENGINES and MARINE STEAM ENGINES
 the largest kind in use, SUGAR MACHINERY, MILLWORK, MINING
 MACHINERY, and MACHINERY IN GENERAL.
 SHIPBUILDERS IN WOOD AND IRON.

SECONDHAND MINING MACHINERY FOR SALE,

IN FIRST-RATE CONDITION, AT MODERATE PRICES.

PUMPING ENGINES; WINDING ENGINES; STAMPING ENGINES
 STEAM CAPSTANS; and CRUSHERS of various sizes. BOILERS, FIT
 WORK of all descriptions, and all kinds of MATERIALS required for
 MINING PURPOSES.

THE PATENT PNEUMATIC STAMPS

May be SEEN AT WORK at HAYLE FOUNDRY WHARF, NINE ELMS,
 by previous application at either of the above addresses.

CAPTAIN TREGAY'S**IMPROVED****PATENT****STAMP COFFER,**

FOR STAMPING GOLD QUARTZ, TIN, AND OTHER ORES.

The gateway is extended, discharge loudly increased, and power economised.
 May be inspected in full work, on application to Captain TREGAY, Redruth,
 Cornwall, who is PREPARED TO TREAT for GRANTING LICENSES for its use
 or to SUPPLY the MACHINES.

HAWKSLEY, WILD, AND CO.'S

PATENT

FLANGED & COMBUSTION-CHAMBERED

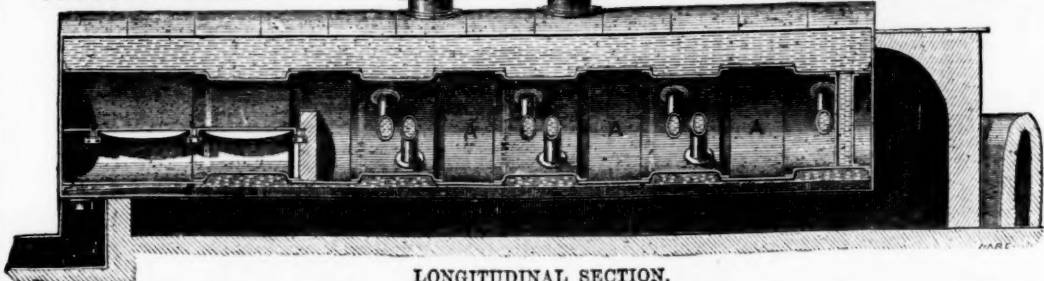
FLUED
BOILERS.



TWO-FLUED BOILER.



SINGLE-FLUED BOILER.



LONGITUDINAL SECTION.

THE FLUES OF THE ABOVE BOILERS ARE MADE OF TWO DIAMETERS, ONE RING OF PLATES BEING 4 inches less than the other, alternately. The smaller rings being flanged, as shown in drawing, are thereby considerably strengthened, besides securing the most material point—a perfect EXPANSION-JOINT. The cross tubes are placed in the smaller rings of the flue, so that any one can easily be taken out and replaced. The larger rings of the flue act as reverberating, combustion, and heat-retaining chambers, greatly economising the fuel. These boilers are strong, durable, and economical, and have been at work a number of years with the most satisfactory results.

PATENTEES AND MANUFACTURERS:

HAWKSLEY, WILD, and CO., Engineers and Boiler Makers,
SAVILLE STREET EAST, SHEFFIELD.

THE "CHAMPION SAW DUST" MINING POWDER.

SAFE in Storage and Transport.
SMOKELESS, made without Sulphur.
NO DANGER IN USE.
NOT SPOILT BY DAMP.

THREE times stronger than the best black Blasting Powder when fired by a fuse.
TEN times stronger than the best black Blasting Powder when exploded by detonation.

All enquiries, &c., to be sent to the—

SECRETARY of the SAWDUST POWDER COMPANY (LIMITED).
Temporary Offices,—36, CAMPBELL ROAD, BOW, MIDDLESEX.

DYNAMITE.

THE BRITISH DYNAMITE COMPANY (LIMITED).

Having erected extensive works at ARDEER, AYRSHIRE, near GLASGOW, with all Mr. NOBEL'S RECENT IMPROVEMENTS for the MANUFACTURE of DYNAMITE, are now prepared to EXECUTE ORDERS for HOME CONSUMPTION and for EXPORT. All communications to be addressed to the Head Offices of the Company,—

7, ROYAL BANK PLACE, GLASGOW.

JOHN DOWNIE, MANAGER AND SECRETARY.

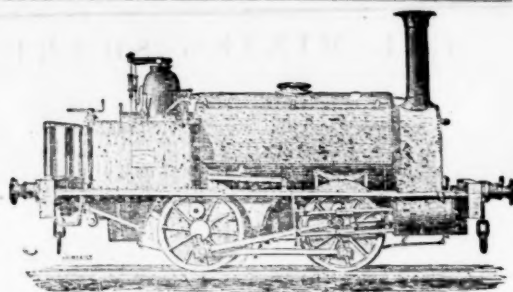
PATENT STEAM EARTH-BORING MACHINES FOR MINERAL EXPLORATIONS AND WATER SUPPLY,

Capable of BORING HOLES from 6 to 36 in. diameter, and to any depth to 2000 ft.

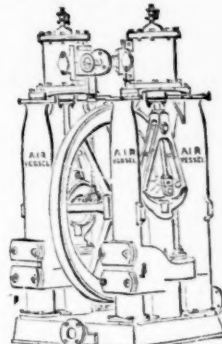
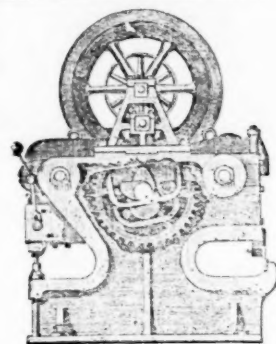
Price, and terms of hiring, may be obtained from the Patentees,—

MATHER AND PLATT,

SALFORD IRONWORKS, MANCHESTER,
LARGE PUMPS, PUMPING ENGINES, WINDING ENGINES, &c.



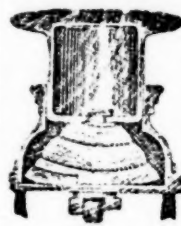
TANK LOCOMOTIVES,
FOR SALE OR HIRE.
HENRY HUGHES AND CO.,
LOUGHBOROUGH.



JOHN CAMERON,

MAKER OF
STEAM PUMPS, PORTABLE ENGINES, PLATE BENDING ROLLERS,
BAR AND ANGLE IRON SHEARS, PUNCHING AND SHEARING
MACHINES, PATENTEE OF THE DOUBLE CAM LEVER
PUNCHING MACHINE, BAR SHEARS, AND RAIL
PUNCHING MACHINES,
EGERTON STREET IRON WORKS,
HULME, MANCHESTER.

THOMAS TURTON AND SONS,



MANUFACTURERS OF
CAST STEEL for PUNCHES, TAPS, and DIES,
TURNING TOOLS, CHISELS, &c.
CAST STEEL PISTON RODS, CRANK PINS, CON-
NECTING RODS, STRAIGHT and CRANK
AXLES, SHAFTS and
FORGINGS of EVERY DESCRIPTION.
DOUBLE SHEAR STEEL
BLISTER STEEL,
SPRING STEEL,
GERMAN STEEL,
Locomotive Engine, Railway Carriage and Wagon
Springs and Buffers.

SHEAF WORKS AND SPRING WORKS, SHEFFIELD.
LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.
Where the largest stock of steel, files, tools, &c., may be selected from.

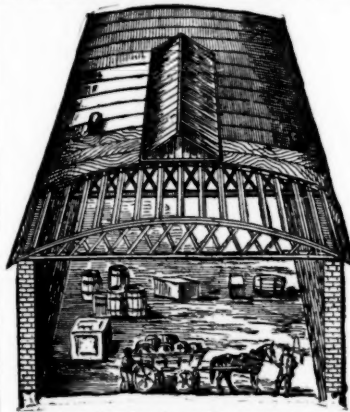
BOHLKEN'S Improved PATENT EARTH BORERS.



THE BEST TOOL FOR BORING HOLES
in the GROUND, to any depth, supplied in
large quantities to CONTRACTORS, RAILWAY COM-
PANIES, BUILDERS, DOCKYARDS, &c., in GER-
MANY, RUSSIA, AUSTRIA, and HUNGARY.
All sizes, from 2 inches to 18 inches diameter, kept in
stock by the Patentee,—

M. SELIG, JUN.,
70 and 71, BISHOPSGATE STREET WITHIN,
LONDON, E.C.

M'TEAR AND CO.'S CIRCULAR ROOFING FELT



FOR
GREAT ECONOMY
AND
CLEAR WIDE SPACE.
For particulars, estimates,
and plans, address,—
M'TEAR & CO.,
20, BUDGE ROW, CANNON
STREET, LONDON;
51, PORTLAND STREET,
MANCHESTER;
OR
CORPORATION STREET,
BELFAST.

The above drawing shows the construction of this cheap and handsome roof, now much used for covering factories, stores, sheds farm buildings, &c., the principal of which are double bow and string girders of best pine timber, sheathed with 1/2 in. boards, supported on the girders by purlins running longitudinally, the whole being covered with patent waterproof roofing felt. These roofs so combine lightness with strength that they can be constructed up to 100 ft. span without centre supports, thus not only affording a clear wide space, but effecting a great saving both in the cost of roof and uprights. They can be made with or without top-lights, ventilators, &c. Felt roofs of any description executed in accordance with plans. Prices for plain roofs from 30s. to 60s. per square, according to span, size, and situation. Manufacturers of PATENT FELTED SHEATHING, for covering ships' bottoms under copper or zinc. INODOUR'S FELT for lining damp walls and under floor cloths. DRY HAIR FELT for deadening sound and for covering steam pipes, thereby saving 25 per cent. in fuel by preventing the radiation of heat. PATENT ASPHALTE ROOFING FELT, price 1d. per square foot. Wholesale buyers and exporters allowed liberal discounts. PATENT ROOFING VARNISH, in boxes from 3 gallons to any quantity required 8d. per gallon.

Letters Patent for New Inventions.

—HAZELTINE, LAKE, and CO., obtain Home, Foreign, and Colonial Patents on favourable terms. Instruction and charges on application.
No. 8, SOUTHAMPTON BUILDINGS, LONDON; 23, CHANGE ALLEY, SHEFFIELD;
79, GEORGE STREET, EDINBURGH; and 247, BROADWAY, NEW YORK.

HIBBERT'S NEW THEORY and PRACTICE of MEDICINE
for HUMAN BEINGS; ditto, for Animals; price 1s. each.
Publishers: SIMPKIN, MARSHALL, and Co., London; JOHN HENRY WOOD, Man-
chester.

HIBBERT'S PATENT ANTISEPTIC MEDICINE and LOTION.
obtained through any chemists, or Mr. HIBBERT, Manchester.

SPECIAL PAMPHLET ON NERVOUS DEBILITY.
Read a Guide to the Cure of Nervousness; on the Special Treatment of Ner-
vous, Mental, and Physical Debility, Lowness of Spirits, Lowness of Sight, Indi-
gestion, &c. Illustrated with cases. Gives rules for cure by the New Medicines.
Dr. SMITH will, for the benefit of country patients, on receiving a description of
their case, send a letter of advice GRATIS. Pamphlet free by post in an envelope
on receipt of two stamps.—Dr. SMITH, 8, Burton-crescent, London, W.C.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Share.	Mines.	Prd.	Last Pr.	Clas. Pr.	Total divs.	Per share.	Last paid
1500	Alderley Edge, c, Cheshire	10 0 0	—	—	11 1 8	0 5 0	Oct. 1872
10000	Belovda Beacon, c, Roche (2000 sh.)	1 10 0	2	1 1 1/2	0 2 0	0 1 6	Jan. 1873
5000	Blanc Caelan, c, Cardigan	3 5 0	—	3 1/2	0 10 0	—	—
18000	Boswell Downs, c, St. Just	3 0 0	—	—	0 5 0	0 2 0	Oct. 1871
200	Botalack, c, St. Just	91 5 0	140	135 140	0 19 0	0 5 0	Aug. 1872
500	Broadwood, c, Cardigan	100 0 0	—	—	110 0 0	0 2 0	Jan. 1872
4000	Broadwood, c, Cardigan	1 18 0	—	—	2 4 0	0 7 0	Oct. 1872
5000	Castell, c, Cardigan	15 7 0	—	—	2 4 0	0 10 0	Oct. 1872
5000	Castell, c, Cardigan	2 10 0	—	—	1 4 0	0 4 0	Aug. 1872
5000	Castell, c, Cardigan	2 0 0	—	—	0 6 0	0 2 0	July 1872
1000	Carn Brea, c, Illogan	35 0 0	160	152 157 1/2	301 0 0	4 0 0	Dec. 1872
2400	Cook's Kitchen, c, Illogan	19 14 9	—	—	11 17 0	0 7 6	Jan. 1873
10240	Devon Gt. Consols, c, Tavistock	0 2 0	7 1/2	7 1/2	116 10 0	0 12 0	May 1872
650	Ding Dong, c, Gwulva	49 14 6	—	—	7 10 0	0 15 0	Aug. 1870
4200	Dolech, c, Camborne	10 14 10	70	70 72 1/2	100 8 8	1 10 0	Dec. 1872
5000	East Baleswiden, c, Sancerre	1 0 0	—	—	15 19 0	0 5 0	Nov. 1872
5144	East Cardigan, c, St. Cleer	2 14 6	—	4 1/2	14 19 0	0 3 0	Oct. 1872
300	East Darnley, c, Cardigan	32 0 0	—	—	208 10 0	1 0 0	Nov. 1872
6400	East Pool, c, Illogan	0 9 9	14	13 14	13 6 3	0 2 6	Jan. 1873
2800	Foxdale, c, Isle of Man	25 0 0	—	—	80 15 0	0 10 0	Sept. 1872
5000	Frank Mills, c, Christow	3 18 6	—	—	4 8 0	0 2 6	Aug. 1870
3000	Gawton, c, Tavistock	3 10 6	—	3 1/2	0 13 0	0 5 0	May 1872
4000	Glusgow Carr, c, (30,000 £1 p., 10,000 15s. p.)	1 0 0	—	—	0 10 0	0 10 0	Feb. 1872
15000	Great Laxey, c, Isle of Man	4 0 0	15 1/2	16 17	15 1 0	0 6 0	Mar. 1872
10000	Great Laxey, c, Isle of Man	40 0 0	—	6 1/2	15 19 0	0 3 0	Dec. 1872
6400	Green North, c, Cumberland	0 0 0	—	—	0 12 0	0 3 0	Dec. 1872
10240	Gunnislake (Clitters), c, Par Station	4 19 0	—	—	0 2 0	0 1 0	Nov. 1870
10240	Horsfoot, c, near Liskeard	8 10 0	19	17 19	62 5 0	0 15 0	Oct. 1872
6000	Hington Downs, c, Calstock	6 4 0	10	8 1/2	4 3 0	0 5 0	Dec. 1872
25000	Killalee, c, Tipperary	1 0 0	—	—	0 3 1/2	0 6 0	Aug. 1872
400	Lisburne, c, Cardigan	18 15 0	—	—	534 10 0	1 0 0	Nov. 1872
2784	Lovell, c, Wendron	3 0 0	10	8 10	0 8 0	0 4 0	Nov. 1872
9000	Marke Valley, c, Cardigan	4 10 6	5	4 1/2	7 13 0	0 2 6	July 1872
9000	Minera Mining Co., c, Wrexham	5 0 0	—	—	61 15 8	0 12 0	Nov. 1872
20000	Mining Co. of Ireland, c, c, c	7 0 0	—	7 1/2	0 8 0	0 3 0	July 1872
6400	New Pembroke, c, Par Station	5 0 0	—	—	0 17 0	0 4 0	July 1872
12000	North Hendre, c, Wales	2 10 0	—	—	0 5 0	0 2 6	June 1872
2000	North Levant, c, St. Just	10 12 0	15	14 15	4 13 0	0 12 0	Sept. 1872
5000	Pelina-drea, c, Redruth	8 2 0	—	—	0 5 0	0 5 0	Nov. 1872
5000	Penhall, c, St. Agnes	3 0 0	3 1/2	3 1/2	2 12 6	0 4 0	Nov. 1872
6000	Phenix, c, Linkinhorne	4 3 4	—	—	39 19 0	0 4 0	Nov. 1872
1772	Polberro, c, St. Agnes	15 0 0	—	—	1 12 6	0 5 0	Mar. 1872
10000	Polberro, c, St. Agnes	10 0 0	—	—	1 10 0	0 10 0	Oct. 1872
1120	Providence, c, Uney Lant	10 6 7	19	12 1/2	104 12 6	0 10 0	Sept. 1872
10000	Prince Patrick, c, Holywell	1 0 0	—	—	0 1 0	0 1 0	Dec. 1872
12000	Roman Gravel, c, Salop	7 10 0	19	18 1/2	1 12 0	0 6 0	Jan. 1873
5800	Rosewell Hill and Ransom, c	4 0 0	17 1/2	18 1/2	0 14 6	0 1 6	June 1871
10000	Shelton, c, St. Austell	1 0 0	—	—	0 1 0	0 1 0	Feb. 1871
5000	Slimeford Dressing, c, Calstock	1 0 0	—	—	0 1 1	0 1 1	Sept. 1872
512	South Cardigan, c, St. Cleer	1 5 0	200	190 210	698 10 0	4 0 0	Dec. 1872
5000	South Cardigan, c, St. Cleer	1 17 6	—	3 1/2	0 10 0	0 2 6	July 1872
6000	South Darnley, c, Cardigan	3 6 6	—	—	1 1 6	0 1 6	Nov. 1870
240	Speare Moor, c, St. Just	36 17 9	—	—	17 5 0	0 9 0	June 1872
440	St. Ives Consols, c, St. Ives	10 15 0	12	11 12	0 10 0	0 10 0	May 1869
8771	St. Just Amalgamated, c	3 10 0	—	—	0 9 0	0 4 0	Nov. 1872
12000	Tankerville, c, Salop	6 0 0	15	14 1/2	3 2 0	0 6 0	Nov. 1872
25000	Terras, c, St. Austell	1 0 0	—	—	0 3 0	0 1 6	Oct. 1872
6000	Truro, c, c, Pool, Illogan	9 0 0	59	56 58	42 13 6	1 15 0	Dec. 1872
4000	Truro Consols, c, Helston	5 15 0	14	13 14	9 11 0	0 10 0	Nov. 1872
15000	Van, c, Llanidloes	4 5 0	39	37 40	8 15 0	0 15 0	Jan. 1873
3900	W. Chiverton, c, Perranzabuloe	10 0 0	12	11 12	51 17 6	0 10 0	Jan. 1873
2448	West Wheel Franchise, c, Illogan	26 13 9	—	—	0 12 0	0 5 0	Oct. 1872
400	West Wheel Franchise, c, Illogan	47 0 0	—	42 1/2	7 10 0	0 1 0	Oct. 1872
12288	Wheel Arthur, c, Calstock	1 0 0	—	—	0 3 0	0 1 0	Dec. 1871
512	Wheel Basset, c, Illogan	5 2 6	60	50 60	638 10 0	1 10 0	Aug. 1872
5170	Wheel Grenville, c, Camborne	7 14 6	—	5 1/2	0 13 6	0 2 6	Sept. 1872
2043	Wheel Jane, c, Kea	2 13 10	7	5 1/2	10 0 0	0 7 6	Nov. 1872
4205	Wheel Kitty, c, St. Agnes	5 4 6	16	15 16	9 8 0	0 10 0	Nov. 1872
2043	Wheel Kitty, c, Uney Lant	3 10 6	—	—	14 2 6	0 5 0	Jan. 1873
506	Wheel Margaret, c, Uney Lant	13 17 6	7	6 7	82 3 0	0 10 0	May 1872
1024	Wheel Mary Ann, c, Menheniot	10 0 0	9	6 1/2	73 10 0	0 2 0	Dec. 1872
1000	Wh. Mary Huchings, c, Plymouth	2 12 6	—	—	2 4 0	0 2 6	Aug. 1872
80	Wheel Owles, c, St. Just	70 0 0	—	—	622 10 0	4 0 0	Aug. 1872
12000	Wheel Russell, c, Tavistock	1 0 0	—	—	0 2 0	0 1 0	June 1872
10000	Wheel Whisper, c, c, Warleggan	1 0 0	—	—	0 1 0	0 1 0	Aug. 1872
20875	Wicklow, c, c, Wicklow	2 10 0	—	4 1/2	52 9 0	0 2 6	Mar. 1872

FOREIGN DIVIDEND MINES.

Share.	Mines.	Prd.	Last Pr.	Clas. Pr.	Total divs.	Per share.	Last paid
35000	Alamillos, c, Spain	2 0 0	2	1 1/2	0 18 6	0 1 6	Sept. 1872
30000	Almaden and Tinto Consol., c, Spain	1 0 0	—	1 1/2	0 3 3	0 1 0	Sept. 1872
20000	Australian, c, South Australia	7 7 6	1 1/2	1 1/2	0 2 6	0 1 0	Sept. 1872
10000	Battle Mountain, c, California	5 0 0	—	—	0 12 0	0 10 0	Nov. 1872
15000	Birds Eye, c, California	10 0 0	—	2 1/2	0 3 4	0 2 0	Aug. 1872
8000	Burns, c, Germany	10 0 0	—	—	0 3 4	0 2 0	Aug. 1872
12320	Burns, c, Germany	5 0 0	—	—	54 0 0	0 10 0	Oct. 1872
20000	Cape Copper Mining, c, So. Africa	7 0 0	20 1/2	28 30	10 19 0	1 5 0	Dec. 1872
20000	Central American Association, c	0 15 0	—	—	0 6 0	0 1 0	July 1869
21000	Colorado Terrible, c, Colorado	5 0 0	—	1 1/2	0 8 0	0 2 0	Oct. 1871
76162	Don Pedro North del Rey, c	0 14 0	—	1 1/2	2 5 0	0 2 0	Mar. 1872
23500	Eberhardt and Aurora, c, Nevada	3 0 0	—	6 1/2	1 0 0	0 6 0	July 1872
8000	Emma, c, Utah (25,000 fully pd.)	20 0 0	—	18 1/2	3 12 0	0 6 0	Dec. 1872
7000	English and Australian, c, S. Aust.	2 10 0	—	3 1/2	2 4 0	0 2 6	Aug. 1872
15000	Ferguson, c, California	2 0 0	—	—	2 11 0	0 5 0	Jan. 1873
30000	Flagstaff, c, Utah	10 0 0	15 1/2	15 1/2	3 1 0	0 5 0	Dec. 1872
25000	Fortuna, c, Spain	2 0 0	—	5 1/2	0 2 4	0 4 0	Oct. 1872
50000	Gold Run, c, Idaho	1 0 0	—	3 1/2	0 10 0	0 6 0	Nov. 1868
60000	Kapunda Mining Co., Australia	1 3 0	—	5 1/2	0 2 0	0 2 0	Jan. 1873
20000	Last Chance, c, Utah	5 0 0	—	4 1/2	14 3 4	0 10 0	Sept. 1872
15000	Llaneros, c, Spain	3 0 0	—	2 1/2	1 10 0	0 10 0	April 1872
12500	Llaneros, c, Spain	3 0 0	—	3 1/2	0 5 0	0 5 0	Mar. 1872
15000	Mammoth Copper Co., c, Nevada	10 0 0	—	18 1/2	0 6 0	0 3 0	Mar. 1872
20000	Mineral Hill, c, Nevada	10 0 0	—	3 1/2	3 0 0	1 4 0	Sept. 1872
12000	Preussische Berg- u. Hütten Actien, c	30 0 0	—	—	12 14 5	1 3 0	Dec. 1871
10000	Pontbiquet, c, France	20 0 0	20	18 20	1 7 0	0 1 0	June 1872
20000	Port Phillip, c, Clunes	1 0 0	—	3 1/2	0 4 0	0 4 0	April 1872
44000	Richmond Consols, c, Nevada	5 0 0	—	3 1/2	6 per cent.	—	April 1871
120000	Scottish Australian Mining Co., c	1 0 0	—	1 1/2	1 0 0	0 2 0	Dec. 1872
30000	Sierra Buttes, c, California	2 0 0	—	3 1/2	0 12 0	0 5 0	June 1872
10000	South Aurora, c, Nevada	5 0 0	—	4 1/2	0 11 0	0 2 0	Aug. 1872
15000	Southwestern Copper, c, California	2 10 0	—	3 1/2	8 0 0	3 0 0	May 1872
20000	Talima, c, c, (5000 sh. are £5 f. pd.)	2 0 0	—	—	—	—	—
500	Westphalian, c, Prussia	20 0 0	—	—	—	—	—

NON-DIVIDEND FOREIGN MINES.

Share.	Mines.	Prd.	Last Pr.	Clas. Pr.	Fr.	Total divs.	Last paid.
50000	Anglo Argentine, c, c, (15 per cent. Preference)	1 0 0	—	—	—	—	—
20000	Anglo-Australian, c, Victoria*	2 5 0	—	—	—	—	—
100000	Anglo-Brazilian, c†	0 10 0	—	—	—	—	—
20000	Australian United, c, Victoria*†	2 10 0	—	—	—	—	—
3000	Bellavista, c, Peru* (£10 shares)	6 10 0	—	—	—	—	—
50000	Braganza, c, Brazil†	0 15 0	—	—	—	—	—
12000	Camp Floyd, c, Utah*	10 0 0	—	—	—	—	—
40000	Cedar Creek, c, California	10 0 0	—	—	—	—	—
5000	Cesena Sulphur Co., Romania	10 0 0	—	—	—	—	—
50152	Chontales, c, c, Nicaragua*† (and 12,542 of £1 15s.)	2 0 0	—	—	—	—	—
6000	Clifton, c, Colorado*	5 0 0	—	—	—	—	—
10000	Crescent, c, Plumas County, California*	10 0 0	—	—	—	—	—
100000	Cuiaba, c, Minas Geraes, Brazil*	0 17 6	—	—	—	—	—
7500	East Sheboygan Preference* (40,000 ordinary shares)	2 0 0	—	—	—	—	—
100000	Elipise, c, California*	1 0 0	—	—	—	—	—
35000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	—	—	—	—	—
50000	Excelsior, c, California*	1 0 0	—	—	—	—	—
40000	Fortune Copper Mining Co. of Western Australia*	2 0 0	—	—	—	—	—
50000	Frontino and Bolivia, c, New Granada*†	2 0 0	—	—	—	—	—
50000	General Brazilian, c*	1 0 0	—	—	—	—	—
40000	Holcomb Valley, c*, California	0 10 0	—	—	—	—	—
10000	Hudson, c, California*	2 0 0	—	—	—	—	—
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	—	—	—	—	—
10000	I. X. L., c, c, California*	5 0 0	—	—	—	—	—
50000	Javali, c, Nicaragua*	2 0 0	—	—	—	—	—
11000	Kansas, c, Colorado*	5 0 0	—	—	—	—	—
12000	Llaneros, c, c, (22 shares)	1 5 0	—	—	—	—	—
10000	London and California, c†	2 0 0	—	—	—	—	—
4000	Malaga, c, Spain*	10 0 0	—	—	—	—	—
50000	Malpaso, c, Colombia* (25000 issued)	1 0 0	—	—	—	—	—
2000	Manzenberg, c, Honfleur, Germany*	5 5 0	—	—	—	—	—
14000	Montague & Waverley Gold Quartz Crushing Co., c, N. Scot.	2 0 0	—	—	—	—	—
6000	Monte Loco, c, c, Italy*	5 0 0	—	—	—	—	—
10000	New Quebrada, c, Venezuela*	5 0 0	—	—	—	—	—
1000	New Rosario, c, Mexico*	1 0 0	—	—	—	—	—
50000	New Zealand Kapanang, c, Comorandel*	5 0 0	—	—	—	—	—
5000	Newfoundland, c* (£10 shares)	8 0 0	—	—	—	—	—
10000	North American, c*	4 0 0	—	—	—	—	—
5000	Pacific, c, c, Nevada (and reduced)*	7 0 0	—	—	—	—	—
5000	Panulillo, c, Chili†	4 0 0	—	—	—	—	—
5000	Pestarena United, c, Italy†	3 0 0	—	—	—	—	—
15000	Pinto, c, Nevada (and 5000 deferred)	5 0 0	—	—	—	—	—
10000	Rica, c, Colombia* (4000 issued)	5 0 0	—	—	—	—	—
10000	Rio Grande, c, Brazil† (£1 share)	0 17 0	—	—	—	—	—
25000	Ruby Consolidated, c, Nevada*	10 0 0	—	—	—	—	—
50000	Russia, c, Orenburg and Utah†	10 0 0	—	—	—	—	—
25000	San Pedro, c, Chili*	2 0 0	—	—	—	—	—
50000	Santa Barbara, c*, Brazil	0 7 6	—	—	—	—	—
5000	Saturn, c, Utah*	5 0 0	—	—	—	—	—
0000	Silver Plume, c, Colorado*	1 0 0	—	—	—	—	—
7500	Snowdrift, c, Colorado*	2 0 0	—	—	—	—	—
2000	St. John del Rey, Brazil*	10 0 0	—	—	—	—	—
50000	Terraviva, c, c, Australia*	19 0 0	—	—	—	—	—
31174	United Mexican Republic, c, Mexico*†	28 5 2	—	—	—	—	—
0000	Utah, c, c, Utah*	10 0 0	—	—	—	—	—
5000	Yorke Peninsula, c, South Australia	1 0 0	—	—	—	—	—
50000	Yucatanmutana, c, South Australia†	3 0 0	—	—	—	—	—